

RAILROAD MODEL

C R A F T S M A N



SEPTEMBER 1966 — 50¢

WHIT TOWERS ON TURNOUTS

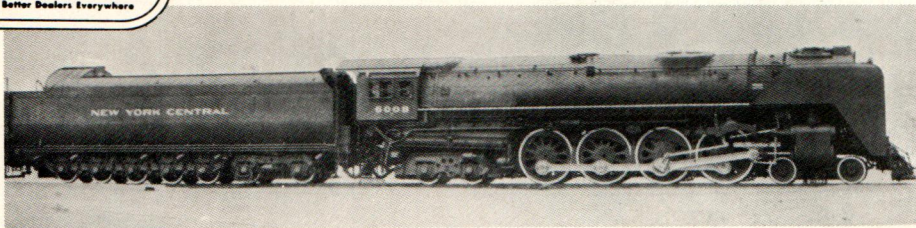


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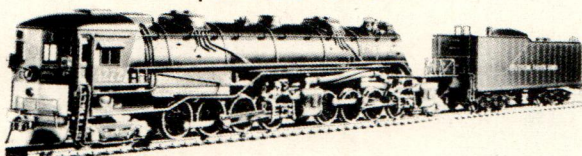
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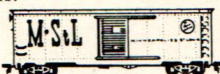
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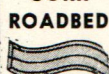
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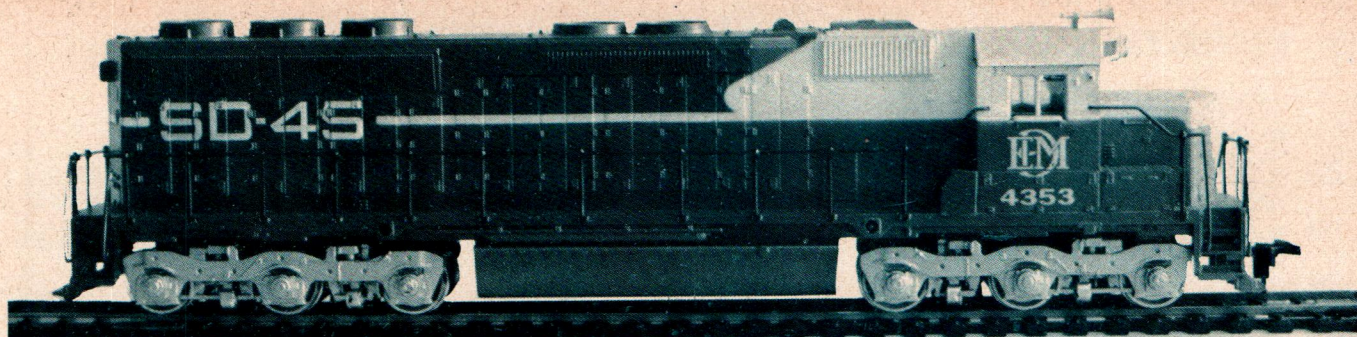
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\$1495 r-t-r

Perhaps you've seen a pair of these giant Electro-Motive demonstrators in sparkling blue and white coloring with silvery trucks, handling some long freight at speed on your own favorite railroad. These 3600 hp. units are equipped with the most powerful 20-cylinder diesel engines ever to be installed in a locomotive.

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DEMONSTRATOR SD-45**

\$1495 r-t-r

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This new giant is a 6000 h.p. unit with 16 wheel drive. And the ATHEARN HO scale model will have 16 wheel drive, too!
Single motor ----- \$19.95
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The GP-35

The Electro-Motive GP-35 is one of the most popular freight locomotives in operation today. ATHEARN is now bringing the unit to you in HO scale. All eight wheels powered, new POWER-FUL motor, with new Floating Power installation, usual superb detailing.

Price, r-t-r ----- \$12.95



The EMD SW-1500

The latest in the Electro-Motive line of heavy switchers, this ATHEARN creation will delight you. Eight wheel drive, POWER-FUL motor with Floating Power installation, priced at only \$10.98, r-t-r.

ATHEARN

11929 S. Western Ave.

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NOTES ON AN OLD TIMETABLE

WHIT TOWERS takes a number of better known switches, er—turnouts, and shows how they can be hooked up with various types of switch machines, elsewhere in this issue. We've restricted this one to code 100 turnouts although the techniques involved are adaptable to any scale, gauge, or rail size. We've added some comments about a new 16mm color sound film made by Whit and Al Stensvold in our Dispatchers Report column.

Russ Porter's Western Valley Railroad, pictured many times in RMC and elsewhere, has been abandoned. Russ reminisces about the two former pikes in this issue and says there will be another some day but not until he finishes restoration of his prototype private car . . . And you guys who've been poking fun at the Lionel Giraffe Car, hide your heads. Photos of a prototype are shown on page 55 . . . Jim Boyd is back, too, with photos of diesels far from their home roads, providing information on how to have authentic foreign equipment on your pet road . . . And its apple cider time which hasn't been forgotten by the southern colonel, E. L. Moore, and he's provided another small local industry to put alongside the old pike.

Carstens Law says that the smaller the model railroad, the faster the trains run, and there are many reasons for this precept. Many smaller pikes use lower priced equipment with motors and gearing that isn't made for slow operation, without re-vamping or constant use of pulse power. The small railroad also has to face the fact that because it is small, and probably a loop, the train will negotiate the loop rapidly. Another way to slow it down, relatively anyway, is to use scale time, in which an hour is only five real minutes. The third solution is to make the railroad bigger, which means a longer run, hence longer to complete a run. Now we'll await the words of wisdom and rebuttal from Tustin and L. A.

Trains do look better when they're operated slowly and the truth is shown graphically by comparing the Whit Towers film and its operation with the HO switcher which zooms around a layout in the film *Time Out For A Hobby*. One is a toy, albeit fully scale. The other is a real railroad in miniature.

Coming up next month are plans by Craig Bossler for a weirdy electric built for the Pennsylvania Railroad and some streamlined passenger cars, logging road equipment from Western Canada in pictures, and a variety of construction features designed to make model railroading, if not easier, a lot more fun.

Hal

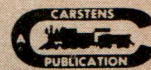
SEPTEMBER 1966

Vol. 35, No. 4

RAILROAD MODEL

CRAFTSMAN

Including TOY TRAINS combined with ELECTRIC TRAINS and HOBBY RAILROADING, MINIATURE RAILROADING, MODEL & RAILWAY NEWS, THE O GAGER, and THE MODELMAKER (Est. 1924) Magazines.



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COVER

The distinguished looking gentleman sitting on the tender of the beautiful 1½" scade 4-4-0 "Tuton," the work of Mark Piper of the Southern California Live Steamers, is our old buddy, Leighton Keeling, well known HOer and former president of the NMRA. At the right, wearing his campaign coat, is the NMRA's new Executive Vice President for 1966-67, Whitney K. Towers, who authored the article on Turnouts, on page 46. Extachrome by Harvey Vander Veen, at the SCLS track at Griffith Park, Los Angeles.

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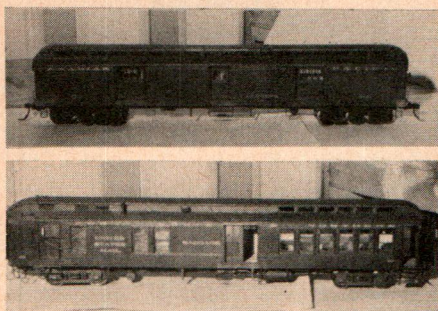
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SEPTEMBER, 1966

SAFETY VALVE



S Gauge, Better Than Ever

Harold Bortz graciously took a few Polaroid shots of two passenger cars I had at the recent S Gaugers meet in Toronto. I thought that perhaps the pictures might bring back some fond memories. So you see, after all these years we are still benefiting from your trip.

Wayne F. Riggle
Regal Kits
706 Colfax Ave.
Benton Harbor, Mich.

Wayne's two cars were built from plans and articles by Hal Carstens, from data acquired on two trips to New England. The first trip was back in 1946 when steam still reigned supreme and passenger trains were plentiful. The second was a Barre & Chelsea combine used on the St. J. & L. C. on its mixed train, now long gone. Ed.

You Can Get Merchandise

Much has been written in these columns and elsewhere recently about the shortage of quality model railroad supplies in hobby shops and certain mail order houses. It is therefore appropriate that we take this opportunity to commend one mail order firm for their excellent service.

On a Sunday afternoon an order was airmailed to Terminal Hobby Shop, Milwaukee, for 18 bags of a particular type ballast, at that time unobtainable anywhere in the metropolitan New York area. In exactly 8 days this entire order was received parcel post. The paperwork received with the order indicated that the order had been received and processed on Tuesday, with the rest of the time being taken up by the post office.

The speedy arrival of the material permitted us to again proceed on construction of the club pike, which had stopped due to a lack of ballast.

J. De Cecil Horne
Ramapo Valley RR Club Inc.
P. O. Box 193
Ramsey, N. J.

The above order arrived very

promptly. Two to three weeks would seem to be average time for a shipment to arrive, and sometimes an order can take up to a month or more. Delaying factors include illegibility in the order, insufficient remittance, vacation and peak rush periods, and items being out of stock for a variety of reasons. Custom orders would, naturally, often require more time, sometimes months, where hand work is involved. Ed.

Central Georgians Arise

Would you please help me get in contact with model railroaders in the central Georgia area who read Railroad Model Craftsman? There are so few clubs and hobby shops anywhere in Georgia that it makes obtaining equipment and meeting other railroaders very difficult.

Shepherd Clark
Box 448
Swainsboro, Georgia

Riding The Tinplate Rails Index

On the strength of your July article, "The Art of Collecting," I went and ordered your October 1957 issue for the index on Hertz' Along the

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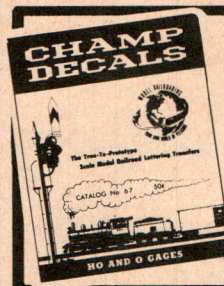
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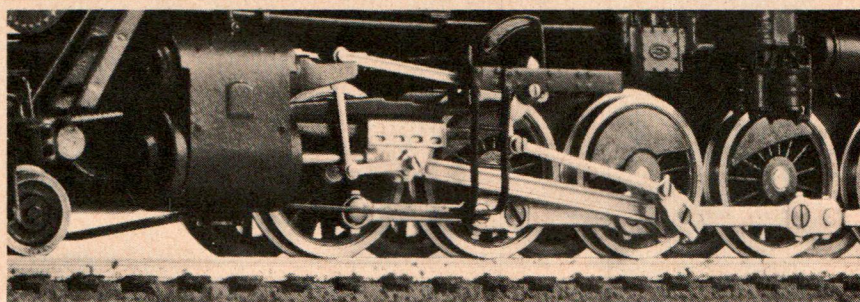
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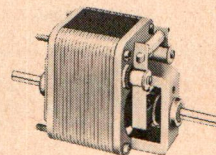
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SATTLER'S HO DEPOT

1510 Cedar Ave. Cincinnati, Ohio 45224
Dealers' Inquiries Invited

Tinplate Track articles. I was darn
well exercised to find neither the in-
dex nor anything on tinplate. Also,
Hertz was writing for Model Rail-
roaders Digest a year before he wrote
for your magazine.

Howard T. Moulton
204 Richards Ave.
Portsmouth, N. H.

Sorry, chief. It was the June 1957
issue that contained the index to
Hertz' series and we've sent one along
to you with our compliments. Lou
Hertz did indeed appear in Model
Railroaders Digest as early as May
1936 but the circulation of those early
issues was very, very limited, and
publication was suspended after a few
issues with the May 1937 issue. The
RMC series by Hertz was the first
series on toy train collecting to reach
a really large audience and is gen-
erally credited with giving the hobby
its big push forward. Ed.

Exchange Place

It would be less confusing if you
would use the terms "Want" and
"Have" in your Exchange Place, as
they are better and clearer to under-
stand as to what a guy has and what
he will trade for 'em.

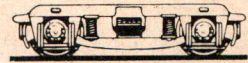
Bill Wallish
1220 Taylor St.

Grand Haven, Mich.

OK, we'll try it again for a few
months. Your every wish is our com-
mand, er—sometimes. Ed.

Red Ball Has PRR Trucks, Too

Just read the July RMC and
thought I'd better twist your leg on
two counts this month. First on page
11 you infer that the old Megow PRR
four wheel passenger side frames are
the only ones available now in HO.
Ha! Red Ball has had this truck for
many years and still offers it.



PENNSY ROLLER EXPRESS

Then on page 25 you mention in a
caption that the cars shown in a photo
are Central Valley but I'm sure a bit
of close research will prove all four
cars to be Red Ball. We do like to get
proper credit.

Howell Day
P. O. Box 301

Dunellen, N. J. 08812

A line drawing of Red Ball's
Pennsy 4-wheel side frame is shown
here. And the cars shown in the
photos were Red Ball. Ed.

Collector of Cabooses

Referring to the May issue photo,
page 47, showing a collection of
Maerklin equipment, is the car on
right end, sixth row from top a
caboose per se, or a guard van of
sorts? As a collector of cabooses, this
looks like nothing I've seen and
yet---.

Paul H. Damrin
1046 Fairwood Ave.
Columbus, Ohio

The car is a baggage or luggage
van in the dark green of the German
Railways, prewar. Cupola is appar-
ently just that, a roof lookout for the
guard. As shown in the photo, it
bears a passing resemblance to some
old Boston & Maine cabooses we've
seen. Ed.

RBB&B Have Moved to Venice

In reference to your article on the
Ringling Brothers-Barnum & Bailey
Circus in the June issue, I would like
to point out that they moved from
Sarasota to Venice, Florida, some
years ago.

J. L. Oates
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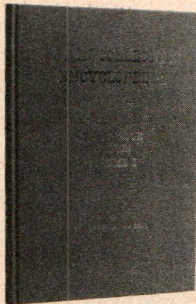
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B.P.: In modeling an Alco road switcher for my favorite railroad, I find that many minor details are at variance with your plans. What can I do?

ANSWER: Trot down to your favorite railroad with your camera and ruler and measure one of the engines, if possible, taking special notice of any variations. Shoot some color slides at different angles so that you can also accurately paint and letter the loco. Detail variations to look for on any diesel include horn location, headlights, trucks (you'd be amazed at how many Alco trucks turn up under EMD bodies, and vice versa), ventilator and stack location, grab iron and hand rails, bells, MU jumper wires, fuel and water tanks, window and door location and detail, and more.

Many railfans also trade or sell photos, should your pet road be located far away. Back issues of Railroad Model Craftsman also contain many valuable reference photos of locos from many different railroads.

Headlights In Daytime, Diesel

D.E.: When railroads run diesels in the daytime, do they leave the lights on at both ends in a train or just the head end?


ANSWER: Erie-Lackawanna Eng. 905 just went eastbound with two coaches, headlights burning on the head end but not on the train end. Tiny rectifiers are available so that the headlights on your locos will burn only in the direction of travel. See your year-round model railroad dealer for them.

Locomotive Is Too Fast

D. M.: My problem is an 0-4-0T plantation locomotive which shoots around much too fast on the very lowest setting of my rheostat, about 35 mph., which is probably as fast as the original loco's top speed! It draws .1 amp at 4 vDC. I also have an imported 4-6-0 that takes off at 10 mph at cracked throttle.

ANSWER: Your problem does not lie in the engine(s) which from the figures you give are very free-running, but in your rheostat which does not slow your engines down enough. Possibly you have only a 25 ohm rheostat when you need a 50 ohm. Instead of replacing the stat you can check your new Walthers catalog for the Marnold "Load Compensator" which throws in a different resistances to enable you to operate light, medium, and heavy locos from one main rheostat. Instructions for installing are included.

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DISPATCHERS REPORT

A Movie Is Born

Whit Towers and Al Stensvold, ASC, have completed a new 23 minute 16mm color sound film on model railroading: *ALP Way Freight*.

The film quickly covers the basics of starting in scale model railroading and then settles down to the task of explaining how a way freight is operated on the Alturas & Lone Pine, Whit's model railroad. Viewers are treated to the sight of superb scenery as the way freight is made up and does its work of picking up and dropping off cars enroute. The film ends with the locomotive clanking into the roundhouse at the end of a long day, as a guitar strums an old railroad melody and the announcer relates that the crew will now head for "Carstens' Flop House for tired railroaders" (actually a lovely though venerable retreat for crewmen at the end of their day's labors, which will shortly be the subject of an RMC construction article).

It is hoped that some means can be found to bring this film to both the active scale modelers and the general public. While far more advanced in scope than "A Million Miles of Model Railroading", which has been acclaimed by millions as an excellent hobby film, *ALP Way Freight* has been seen and appreciated by non-modelers who are amazed at the detail and operating perfection and color of the film. In our book, it is the greatest film on model railroading that has ever been made. Should the film be made available for viewing in your local area, don't miss it.

Loco 1

We've gathered together the best of the many diesel and railcar plans which have appeared in *Railroad Model Craftsman* over the past quarter century and compiled them into one of the most fascinating (we modestly blush) locomotive plan books we've seen. Called *Loco 1*, the book will be hard covered in attractive leatherette with gold stamping. Page size is just about identical with this magazine, but we've turned the page sideways for easier handling. In this manner almost every diesel can be shown full size for HO without cutting. A few smaller units are shown in O scale. While many pages are similar to the way the plans appeared in this magazine, the great bulk of the pages have of necessity been redone, copy reset, corrections made where necessary, and many new photographs added.

The result is a survey of internal combustion motive power and railcars from the early days of the century through the present. In the 144

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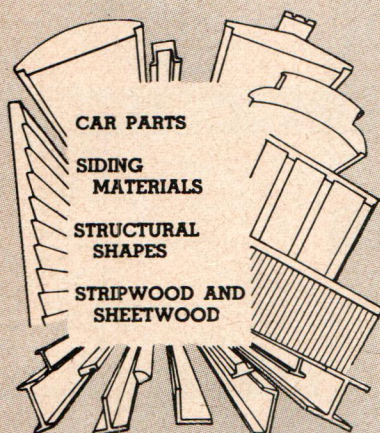
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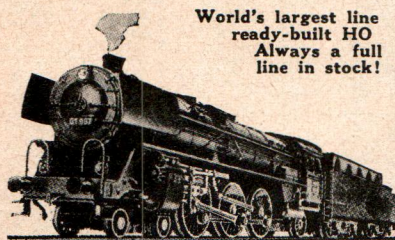
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It was 28° outside when the Grand Haven Tribune photographer shot this photo of Grand River & Western club prexy Harold Stevens with his paws on an engine in the main yard. The club leases an old Coast Guard barracks, Camp Building No. 12, and has meetings every Monday night at 7:30. Modelers 16 years of age and older are welcome to join. Art Million, secretary, will provide further information.

pages are almost all of the better known diesels and a wide variety of lesser known units, demonstrators, and noble experiments. Included are locomotives by Westinghouse, General Electric, several Canadian builders, home builds, and the products of Baldwin, Electro-Motive, Alco, Fairbanks-Morse, and others. Loco 1 has been designed to fit conveniently on almost every bookshelf, and it also handles readily for browsing or use. Watch the ads for the release date this fall, or order one now at your favorite hobby shop or book store.

LOADS OF new HO locomotives pouring into hobby shops and promise of plenty more to come. *Athearn's* blue and white demonstrator SD-45 shown on the August 1966 RMC cover has been in eastern shops for weeks.

Associated Hobby Manufacturers are now shipping their New York Central J-3a Hudson and its another plastic beauty. *LMB Models* is shipping its Union Pacific 4-10-2, a monster of a steamer. *Bowser's* USRA heavy Mountain kit is another new one sold less tender because the prototypes came with such a wide variety of tenders. You can use any of the Bowser tenders or equip the engine with any other make of suitable tender for your desired prototype.

Heavy electric fans have been making a lot of noise of late and maybe the *Model Engineering Works* New

Haven EF-1 will quiet their hunger pangs. It's a brass import at \$52.50, assembled unpainted. Quantity is limited. Address MEW at Box 261, Monrovia, California.

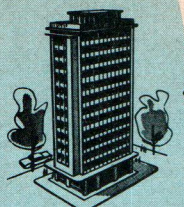
Polk's will shortly have a brand new Aristo-Craft all brass imported Nickel Plate Berkshire. Watch their ads for full data . . .

Ken Kidder, Box 213, San Francisco, Calif. 94101 has a series of 57 ft. rapid transit cars at \$19.50 RTR unpainted powered with trailers at \$10.50. Japanese design is very much like US cars of the 1920s. These are all brass imports and power cars have working pantographs. Quality is good.

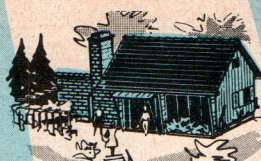
Modelers have been clamoring for Electro-Motive FT freight diesels, regrettably not available at this writing. Another scarce one is the EMD F-9 available these days only from *Pacific Fast Mail*, P.O. Box 57, Edmonds, Wash. 98020 (Canada, 5816 Cambie, Vancouver, B. C.) in an RTR AB combination (A is powered) for the following roads: Baltimore & Ohio, Chesapeake & Ohio, Burlington, Great Northern, New York Central, Santa Fe passenger, Pennsylvania passenger, Southern Pacific Daylight, Southern, and Union Pacific. They list at \$37.95 for the AB., all metal by Ten-shodo.

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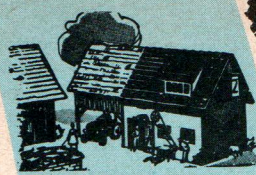
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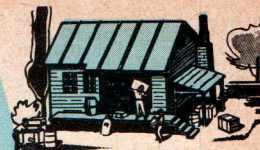
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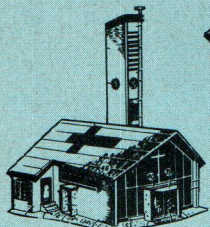
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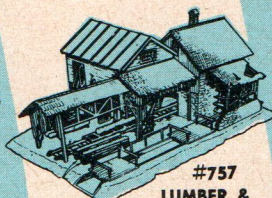
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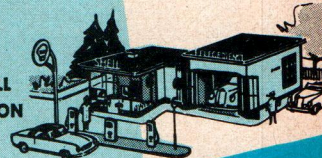


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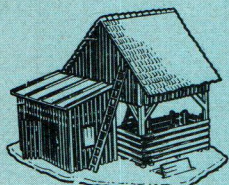


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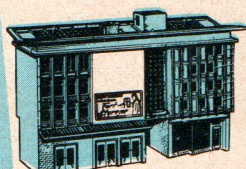
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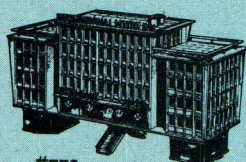
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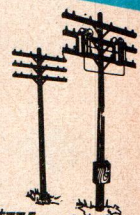
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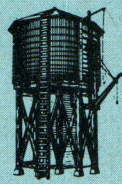
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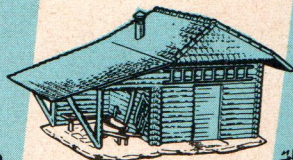
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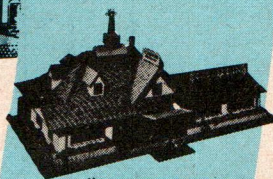
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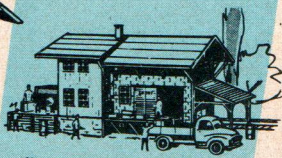
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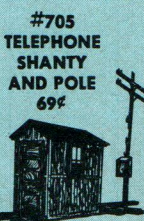
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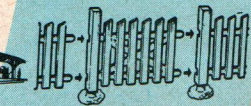
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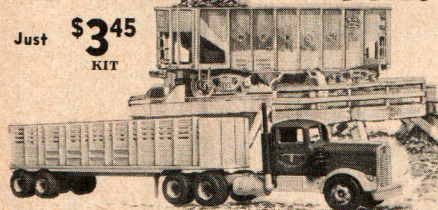
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- 2TI Mack C.O.E.* 2 axle tractor and tanker

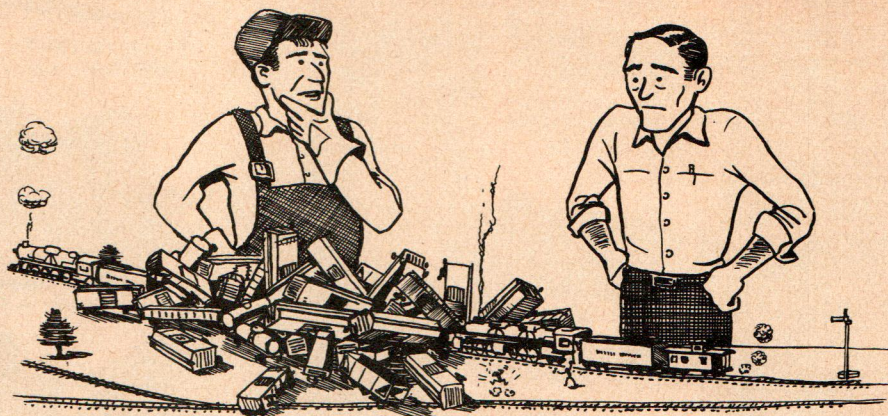
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in Ambroid's regular line (not 1-5000). Road name decals are included for ACF, ATSF, NYC, MKT, UP, and GN.

Suydam, Box 55, Duarte, Calif. 91010, is offering a new neighborhood market kit with interior detailing and interior lighting. The kit, which lists at \$5.95, includes even the stacks of fruit and vegetables.

HOers who haven't as yet had a demonstration of Kadee MKD magnetic couplers might send for the MKD-13 Coupler Test Kit at \$3.00, available through dealers or from Kadee, 720 S. Grape St., Medford, Oregon 97501. The MKD couplers permit the modeler to uncouple cars away from the ramp, by following a certain specified uncoupling procedure. Various Kadee coupler shanks and gear box arrangements permit easy attaching to almost every make and type of car or loco made.

And speaking of couplers, we expect one major imported line of HO to drop the NMRA type coupler from its equipment within the year, although the cars may still be packed with them for the convenience of modelers preferring the NMRA type coupler. Fleischmann dropped the horn coupler last year on its U. S.

imports, reverting to the standard Fleischmann coupler which had continued to be used in Europe.

Sattler's HO Depot, 1510 Cedar St., Cincinnati, Ohio 45224, continues to offer specialized HO custom switches in a wide variety of frog numbers, radii, and sizes. Typical prices include curved crossovers at \$15.00, slip switches at \$24.95, and No. 10 double crossovers at \$20.50. Less exotic turnouts include No. 10 switches at \$4.50, switch kits at \$2.95, and curved crossings at \$5.95.

Collectors Car

Nearly 200 collectors gathered for the largest national convention ever held by the Train Collectors Association on the west coast. Convention site this year was at the Miramar Hotel in Santa Monica, with former national president Herb Morley acting as convention chairman. Among the highlights were the display of Thorley Hoople and McCoy standard gauge equipment, the special TCA convention boxcar by Lionel, and the business session which featured a tightening up of membership procedures. 1967 convention will be held at Baltimore, Maryland, with the Eastern Division, WB&A Chapter, acting as host.

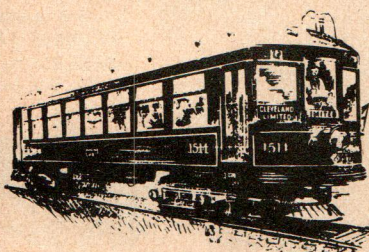
Badger Air Brush

Moderately priced air brush kits are offered by Badger, complete with pressure aerosol containers, at \$24.95 for the standard kit and \$26.95 for a deluxe kit. The kits include a Badger air brush capable of fine spray painting. Propel can, 6-foot air hose, regulator and control valve, and instructions. The deluxe kit also includes extra Propel, stirrers, and extra jars.

A companion Badger compressor, diaphragm type, is also offered at \$39.00. The unit is oil-less, lightweight, and relatively quiet. A foot-switch is also available at \$10.00. Replacement parts, and heavier duty spray guns are also available.

NORTHERN OHIO INTERURBANS *

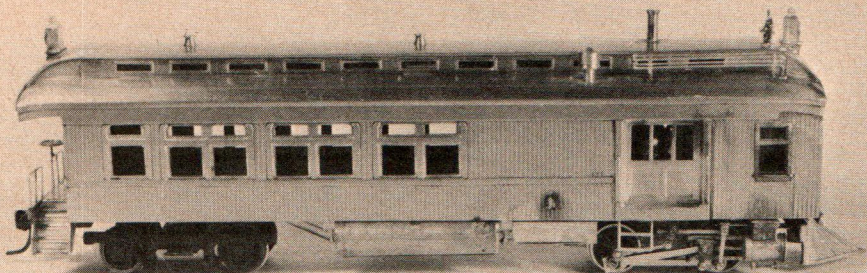
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build this Steam Motor Car



The author's model in a builder's side view, showing the converted Pacific Fast Mail combine body with its filled in blind end, various new detail bits, and a power truck from a Ken Kidder steam dummy.

Steam motor cars have long since disappeared from the rosters of the real railroads and they're almost as scarce on the model pikes, unless you build one as Bill Schopp did.

FROM TIME to time I get carried away by my own answers to readers' questions. In this case it was an answer which suggested using the mechanism from a Ken Kidder steam

dummy to power a steam motor car. An all-brass Pacific Fast Mail open end combine cars struck me as a good superstructure. But before I was done, the baggage car was also "used up" to provide "wood" and windows for the enclosed front platform. And a badly battered Climax provided valve gear for making the car look more complex. (I have since found that Climax valve gear, cylinders, and flywheels are sold separately by PFM, when available, but I hesitate to quote price owing to recently increased duties on parts.)

A steam motor car built along these

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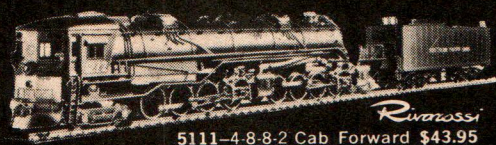
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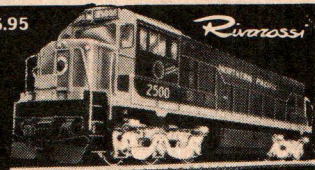
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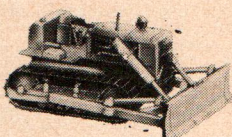
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Treble-O-Lectric catalog 75c (refundable) contains 22 track diagrams, plus layout photos and helpful hints for planning and constructing your miniature "000" railroad.

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lines is a free-lance matter. When there were steam motor cars, prior to gas-electric and diesel-electric motor cars, each one was unique, either an experiment by a hopeful manufacturer, or a Master Mechanic's brainstorm put together in the railroad's shops. Within reason, what ever you do in making a steam motor car likely was done, or at least could have been done. Photos for various prototype steam cars can be found in back issues of the railroad magazines. Plans for a 1906 Rock Island steam motor car are found in the Dec. 1962 RMC and are reprinted in LOCO 1, to be published this fall by RMC.

Take the matter of the power truck. You could put under such a car the Kidder steam dummy drive intact, including the tiny cylinders, cross-head, etc. The cylinders could be at the front or rear of the truck, as convenient. Side rods could be omitted, driving only one set of drivers, for the car as built by me is tremendously over-powered: in a test, it pulled FOUR of the brass PFM open platform cars, each one about 8 oz., unloaded, around a layout, though slip-

(Continued on page 15)

RMC

TIMETABLE

NOTE: Items for RMC TT are welcome but must be received 6-8 weeks before issue in which item is to be inserted. Please print or type.

Trolley Meet

CLEVELAND, OHIO. Sept. 31, Oct. 1, 2. Fall Trolley Men Meet, host Western Model RR Club of Bedford. Operations, movies, slides. Fri. 7-10 P.M., Sat. 1 P.M. to 7 P.M. 10 A.M.—Noon ride on Columbia & Southwestern—\$2.00 per person; 1 P.M.-5 P.M. op. at club. Adm. 1 or more trolley cars of any scale. Info. contact Warren D. Smalley, 2999 Grandview Ave., Cleveland, Ohio 44106. Phone 216-321-5175.

BEDFORD, OHIO. Sept. 30, Oct. 1-2. Western Reserve Model RR Club Trolley Meet, 30 South Park St., Bedford. Op. O & Ho trolley and steam layouts will be featured. Info. contact Warren D. Smalley, WRMRC, Box 282, Bedford, Ohio.

Regional Meets

PORTLAND, Me., Sept. 30, Oct. 1, 2. Northeastern Region, NMRA Fall Convention, Sheraton-Eastland Motor Hotel. Special convention fantrip behind last U.S. Run of CN 6218 in conjunction with 470 Club of Portland. R.R.E. "Down East" Banquet, Clinics, Movies, Auctions, Displays. Info: Richard E. Towle, Box 328, Loading Place Rd., Manchester, Mass. 01944.

MORRISTOWN, N. J. Sept. 18. Morris County Model RR Assn. hosts to Garden State Div. NER NMRA Annual Family Picnic, Morris Junior Museum. Rides on Morris Central RR and Live Steamers. Free adm. to picnic. Info. contact John Hancock, 51 Headley Rd., Morristown, N. J. 07960.

ROCHESTER, N. Y. Oct. 21, 22, 23. Niagara Frontier Region, NMRA Fall Convention, Sheraton Hotel and Motor Inn, downtown Rochester. Visits to club and home layouts; steam fan trip, clinic featuring John Werlich; banquet, auction, and much more. Info: Russ Christensen, 76 Yarmouth Rd., Rochester, N. Y. 14610.

DENVER, COLO., Oct. 1, 2. Rocky Mountain Region NMRA Fall Convention. For further info. contact: Ralph W. Hawes, 8223 Adams Way, Denver, Colo. 80221. Phone: 429-8668.

MINNEAPOLIS, MINN., Oct. 8, 9. Thousand Lakes Region NMRA Fall Rally, Howard Johnson Motel, Hiway 494 & Hiway 100. Sponsored by Minneapolis Society of Model Engineers and Progress Valley Model RR Club. Info. Gayle Olson, 7333 Ann Lane, Hopkins, Minn. 55343.

WAREHOUSE POINT, CONN. Sept. 24: Nutmeg Div. N.E.R., N.M.R.A. will hold operation at Warehouse Trolley Museum. Info. contact Charles E. Bettinger, 52 Devon Dr., Manchester, Conn. 06044. Tel. 643-5925.

LA GRANGE, ILL. Oct. 9. Midwest Region Fall Meet, Electro-Motive Div., Demon, clinics, contest, op. Model RRs, tour of shops and grounds, auction, banquet. Info: Walt Barry, 9410 Drake Ave., Evanston, Ill. 60203.

Club Shows

BEDFORD, ENGLAND. Sept. 2, 3, 4. Bedford & District Model Rwy. Soc. Annual Model Engineering Exhibition, The Corn Exchange, Bedford. All ga. in model rail, incl. live steam & traction eng. Hours: Fri. 1:30 PM-9 PM; Sat. 10:15 AM-8 PM. Sun. 10:30 AM-5 PM at Longholme Lake, The Embankment for model power boats & live steam rail exhibition. Adults: 2/- (\$.28), Children 1/- (\$.15). Contact Mr. Ron Tansley, 92 Foster Hill Rd., Bedford.

WALNUT CREEK, CALIF. Sept. 23, 24, 25. Walnut Creek Model RR Soc. Fall Show, Railroad Ave., across from S. P. Station. Op. large HO & narrow ga. (HO#3) layout Hours: Fri. 8-10 PM, Sat., 2-10 PM, Sun., 2-8 PM. Adults: 50c, Children 25c. Info. R. Dannenbrink, Secy. P. O. 1078, Walnut Creek, Calif.

HAGERSTOWN, MARYLAND. Aug. 8 thru 13. Hagerstown Model RR Club, Inc. Summer Show at Fairgrounds. Hours: 6-11 P.M. Adm. free. O & HO Gauge. Info. Dennis W. Masters, 15 Harvard Rd., Hagerstown, Md. 21740.

NEW HAVEN, CONN. Nov. 4, 6, 11, 13, 18, 20. New Haven Society of Model Engineers Fall Show, 90 Court St. Hours: Fri. 7:30-10:00 p.m.; Sun. 2:30-5:30 p.m. Fare: Adults 50 cents, Children 40 cents.

AKRON, OHIO. Oct. 15. Jamboree at URCL-PWA Local 9 Hall, NMRA members of Akron area hosts. 9 a.m. until midnight. Layout tours; operating contests; Swap Shop; prizes, buffet supper. Info: Clyde E. Wagner, 3887 Hile Rd., Stow, Ohio 44224.

Club Notices

BUFFALO, N. Y. Model RR Club of Buffalo Inc. relocated at new address: c/o Harding Boys Club, Riverdale & Grover St., Buffalo 7, N. Y.

FLUSHING, L. I., N.Y. Meeting of Sunrise Trail Div., Northeastern Region, NMRA will be held at 1 p.m. Sept. 17, in Macedonian AME Church Youth Center, 37-22 Union St. Info: Robert A. Miller, 152-27 135 Ave., Jamaica, N.Y., 11434. Phone: 212-LA 8-4077.

Fan Trips

WHIPPANY, N. J. Every Saturday, Sunday and Holiday afternoon trains leave Whippany Sta. (Rte. 10 & Whippany Rd.) 1:30, 3:00, and 4:30 p.m. Fares: Adults \$1.50, Children 75 cents.

LOS ANGELES, CALIF. Sept. 2-5. Pacific RR Society sponsors special train via Union Pacific to Salt Lake City and Yellowstone Natl. Pk. Leaves L. A. Union Sta. 7 pm (DST) Fri.; returns Mon. eve. Info. Pacific RR Society, P. O. Box 5279, Los Angeles, Calif. 90055.

PORTLAND, ME. Oct. 2. Steam Train excursion sponsored by The 470 RR Club, div. RR Enthusiasts, Inc. Leaves GT Station 7:30 A.M. EDT to Island Pond, Vt. Photo stops, run bys. Snack bar on train. Arrives back in Portland 8 P.M. Fare: Adults \$12.50, children 6-12 \$7.00. Info. contact Phillips Prince, 73 Skylark Rd., Portland, Me. 04103.

(Continued from page 14)

ping a bit on a 3% grade. There needn't be ANY cylinders, for you could consider the power truck to be inside connected. My car uses the Climax cylinders which are a little larger than the steam dummy ones, but are meant to fit the Climax' Walschaerts valve gear which is the smallest valve gear obtainable.

(The cylinders are mounted as the original Kidder units were, and the valve gear hanger is attached by solder to a new crossbearer after some unsuccessful attempts to solder it to part of a yoke in turn soldered to the ends of the guides).

You'll note that the motor on the power truck has been turned around and relocated. Atop the motor on a bracket is the male part of a Central Valley snap-on kingpin, with a disc beneath it to minimize rocking. The female part of the snap is soldered to a crossbearer located up inside the body. Naturally the floor has to be cut out to clear the power truck. I replaced the trailing truck with a Central Valley passenger truck which was more in proportion to the size of the power truck. Underbody detail was moved around and increased with several tanks.

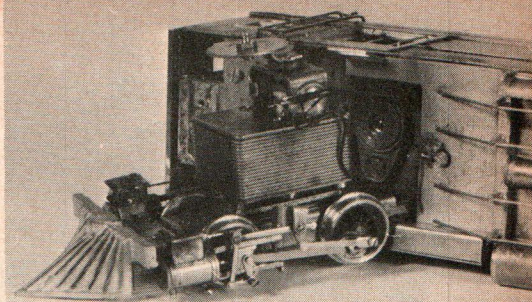
Yes, this IS a rather small steam motor car, but this PFM combine is the only open end car in brass available at the moment. I prefer brass for such cross-kitting, though I admit

that, in size, an Ambroid open end combine would be better from a size standpoint. Readers who would prefer the wood Ambroid, or LaBelle body can certainly proceed on their own, using the general ideas I used on the brass car.

Detail can be added as one pleases. I have transferred the steam dummy headlight to the roof of the steam car. Another possibility would be to solder a big Lima Arc headlight over the front train door. A ladder-stock ladder to the roof seemed appropriate, though necessary stirrup below it could not be installed because of the valve gear. The steam dummy stack was cut down and installed in the roof. The whistle is Cal-Scale (a bit hefty!) and the cooling coil on the right side, Kemtron. The interurban style wood pilot is a Kemtron cast "Belle of the Eighties" cowcatcher, perhaps a bit too pointy for the years when the car might have been built. I have it attached to and swinging with the pilot, but believe now it would be more prototypical to have it mounted to the car body.

A good weight, right behind the power truck, screwed to the floor, helps give the car more traction to enable it to pull the heavy load earlier described.

Black marks on the brass carbody in the photos were made by soldering tweezers and can be removed by brushing with a Rush typewriter



Here's the power unit ready to install.

eraser (stationery store) which has glass bristles. Blow the broken ends of bristles away and don't let them get in your fingers.

Boy, what a sight to see this little car buzzing along with that valve gear thrashing! I wonder about installing a smoke unit! And now, what to do with the steam-dummy body? Maybe it would be an unusual caboose. Or a model cable car. Hmmm.

(AUTHOR'S NOTE: Since this car was built, the MEW Hall-Scott gas car has appeared. This would make an excellent basis for a steam car similar to the one described here, with appropriate changes in the power truck and underbody and roof detail. The cylinders could, for such a car, be placed toward the center of the body at the builder's directions. WS).



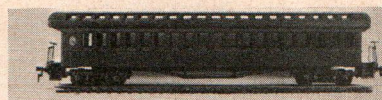
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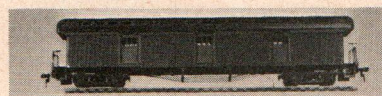
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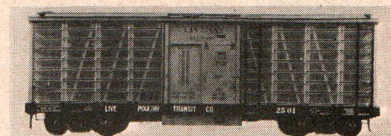
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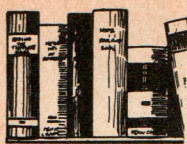


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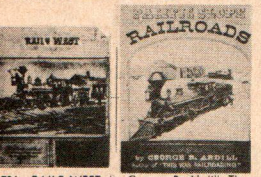
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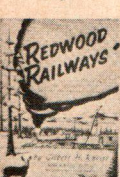
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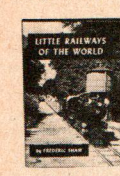
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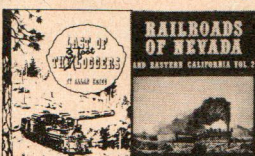


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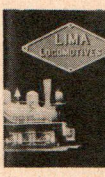
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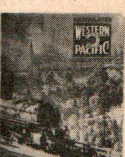
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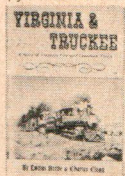
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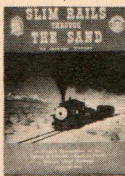
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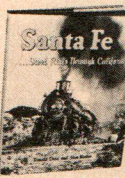
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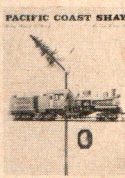
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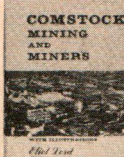
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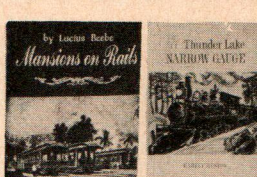
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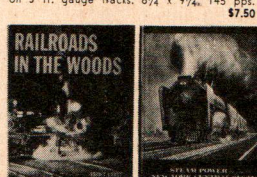
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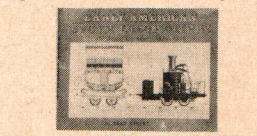
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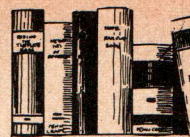
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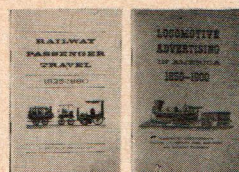
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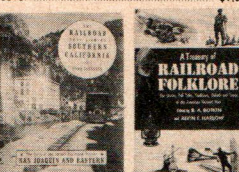
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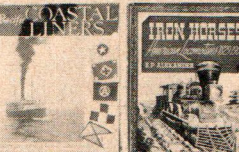
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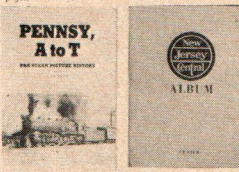
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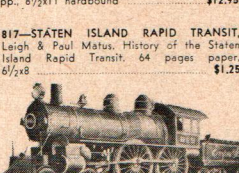
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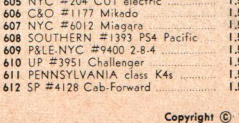
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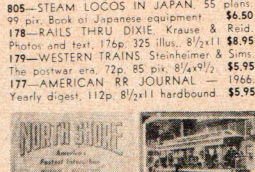
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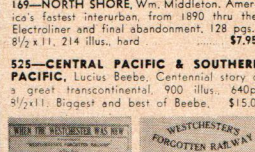
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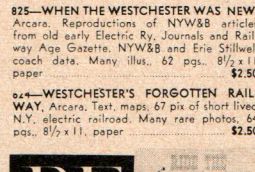
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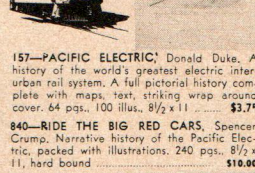
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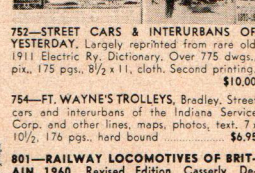
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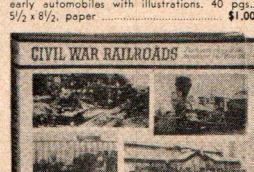
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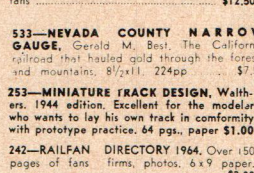
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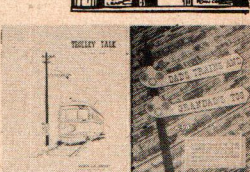
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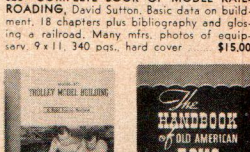
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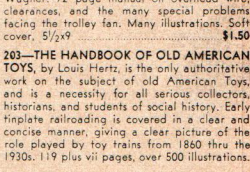
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the saga of the WESTERN VALLEY RR

by Russell D. Porter



LEFT—The author at work rerailing a hopper car while son Rob does the same with a boxcar, none of which is a reflection on the operating capabilities of the pike or the workmanship of the author. Much of the steam power is custombuilt.

BELOW—One of the most famous model railroad viaducts of all time was Porter's hand carved plaster of paris stone arch bridge measuring 305 ft. long, 120 ft. high and boasting five arches. Bridge supported a gantlet track. Scale is HO.



Russ Porter's HO railroads were built with high speed mainline operation in mind and despite a fondness for big Milwaukee steam power, diesels did most of the hauling.

IN THE years from 1948 through 1965, two HO layouts formed the wide spread railroad empire of the Western Valley Lines.

Layout No. 1 was built in 1948-1949 in a 30x12 ft. basement room. Entrance to the layout had to be made by two duck-under's near Cliff Yard,

which made for much groaning and panting among the older model rails. During the 1950 NMRA National Convention, ninety-two signed-in guests made their entrance to the WV in this manner.

Following crude, hand drawn sketches made in spare moments, the ceiling, lights and layout, including all scenery, took shape in 12 months of late evening and week end work. Thinking back, I often marvel at the patience of my wife. The majority of the time she would bring supper down to me not to mention late, late snacks.

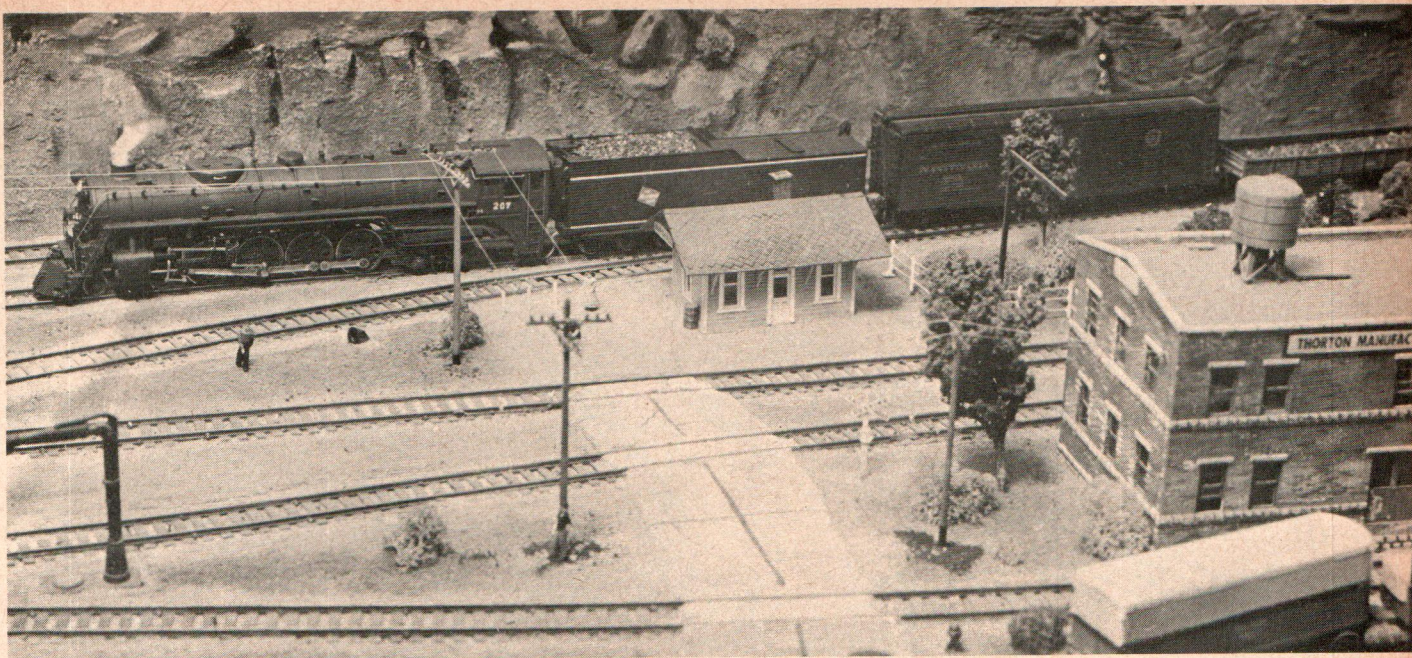
Finishing plaster was used throughout with vinegar added to retard the

time of setting. While still wet, dry plaster was sifted over, which gave the scenery an earth-like texture. When dry, erosion marks were cut in using assorted size screw drivers. The scenery was then painted with oil base paints and lichen attached where necessary.

Homemade searchlight signals actuated with Walthers trackside contacts and twin coil switch machines were used throughout the layout.

Enough reversing loops were put in to eliminate the need for turntables.

The best way to get acquainted with the track plan is to go back to early 1950 and climb board No. 7, a

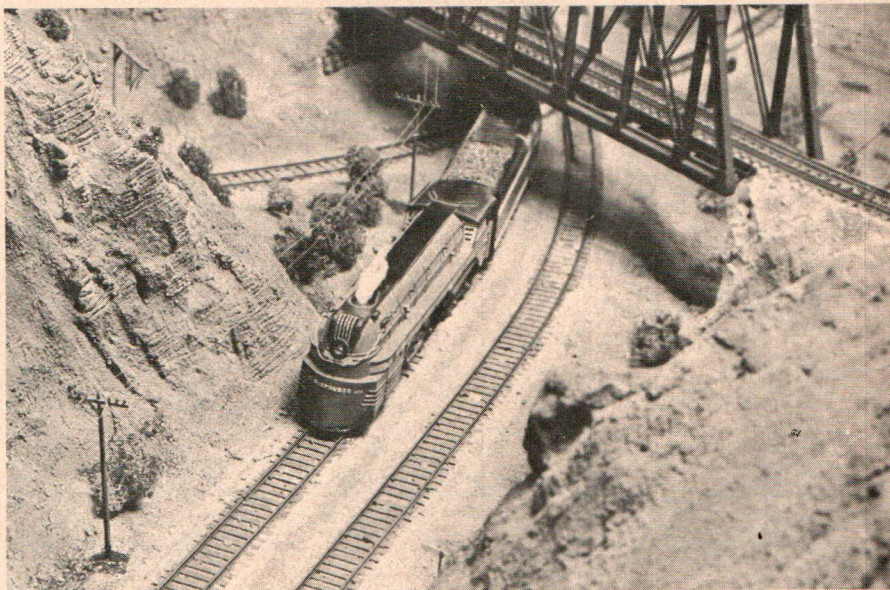


hotshot freight, which has just been made up in Cascade Yard and is ready to go West on the Cascade Yard Make-Break track. Our train consists of engine No. 45, a WV detailed Varney 4-8-4, fifteen assorted freight cars and a caboose. Westbound signal clears to green and No. 7 slowly starts to pound the iron toward West Crossing Tower at the entrance to Del-Mar Tunnel. The big Northern clatters over the 3 track diamond and into the tunnel, where a short time later we emerge into daylight and swing onto the West Main. With increasing speed we start climbing toward the mountains and the fireman points out his side window, at Cliff Yard Tower and its busy passenger car yard.

Now we lean left into a gentle curve, soot the underneath of a highway bridge and a few minutes later cross the heavy girder bridge which overlooks the East end of Cascade Yard. A few seconds later we enter the long Tunnel (the longest bore on the WV) and after what seems like a lifetime, daylight once again.

Looking at his watch, the hogger remarks that we will make Brown Rock Division Cut-off with minutes to spare before No. 21, The Southwest Limited, nips at our heels. Daylight fades fast as we plunge into Bald Knob Tunnel and then as we come again into daylight, the hogger mumbles a few harsh words as a red signal looms up at the approach to the Brown Rock turnout. The Northern slows down, swaying from side to side as the brakes take hold and then release as the signal changes to yellow for the turnout. Going into Brown Rock Tunnel, the brakes are gently applied as this is a rapidly, descending and curving grade. Outside the tunnel to our left, are flat cars loaded with slabs of stone from the nearby quarry. No. 12, the daily way freight, will pick these cars up in a few hours.

No. 72 timefreight with Milwaukee Road S-2 4-8-4 No. 207 roaring past the small depot at Marshall Jct., on its journey to Grand Falls via Kass Jct. Buildings are scratchbuilt. Paved road has many cracks.



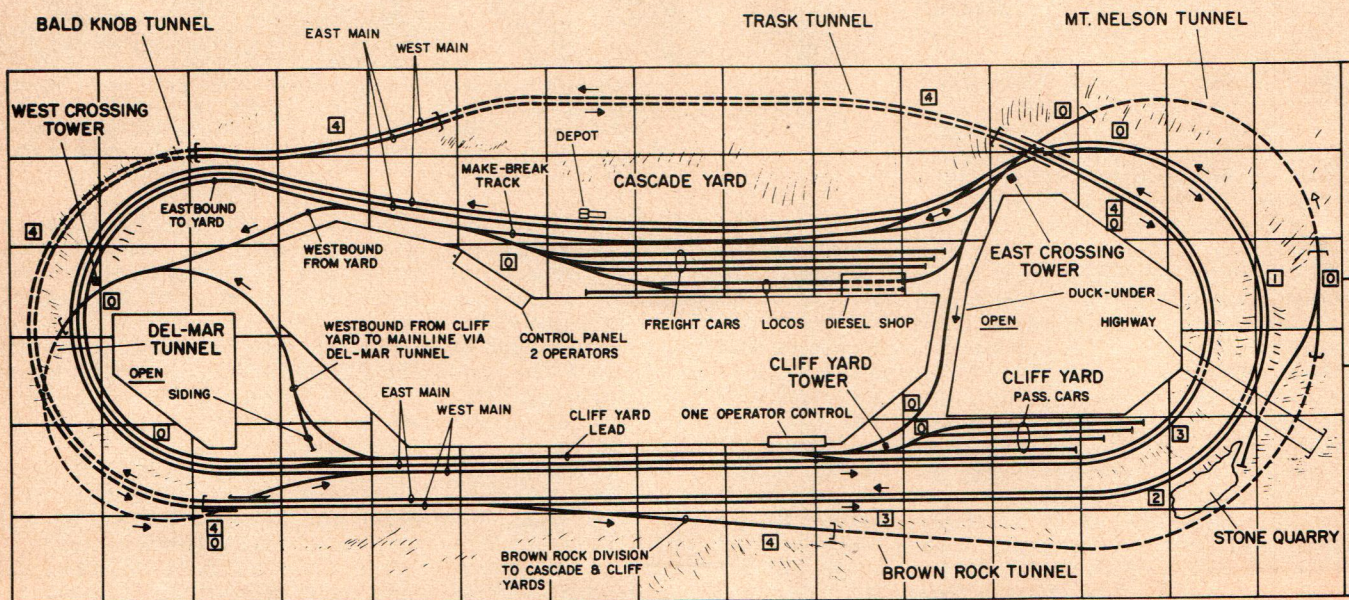
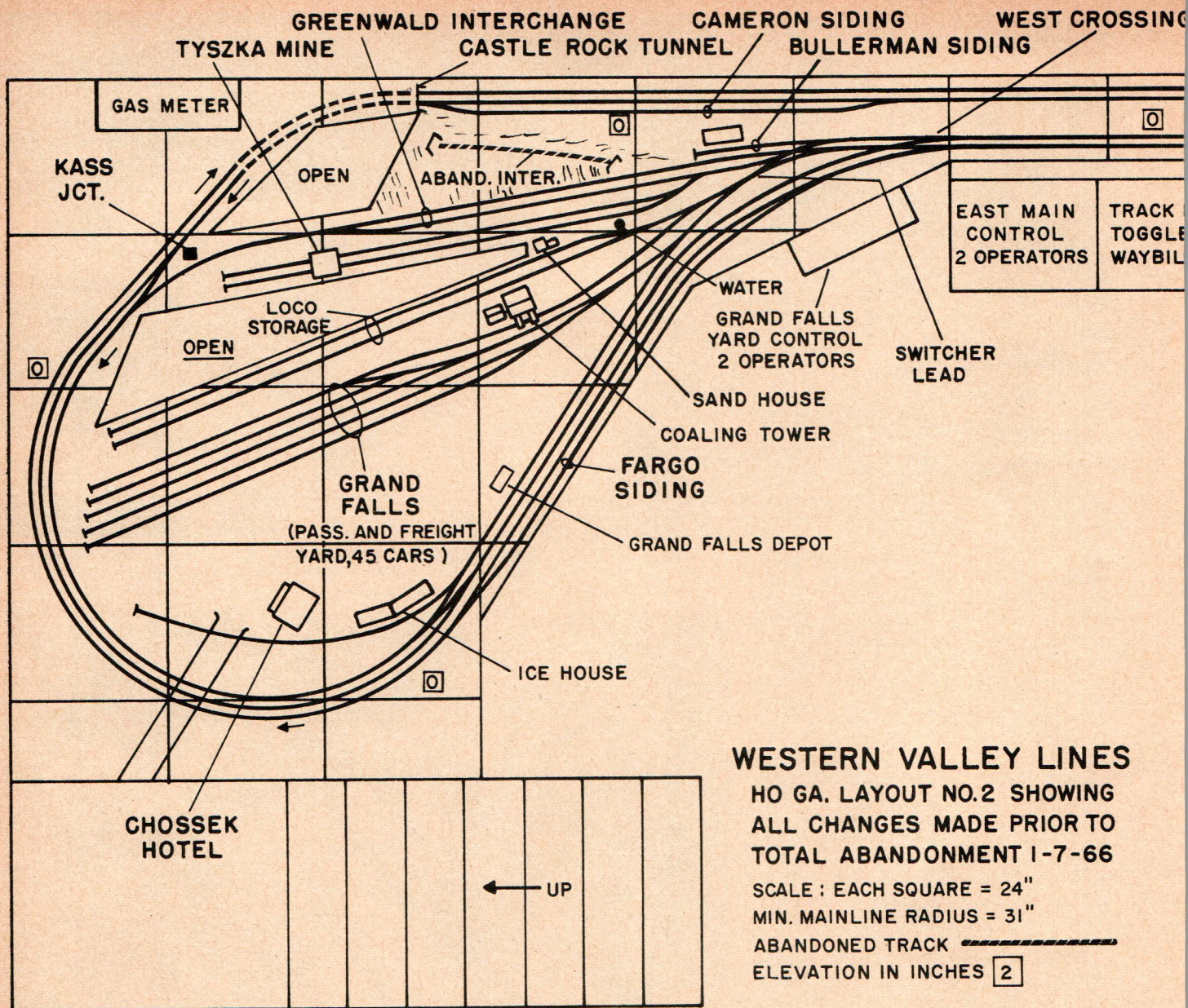
Homebuilt Milwaukee Road F-7 4-6-4 Hiawatha, pride of the Western Valley Lines thunders through the diamond at East Crossing in a 1957 photo. Western Valley followed Northwestern practice of left hand running, not shown here because of repairs being made to track.

The signal at the entrance to Mt. Nelson Tunnel glows red over yellow (proceed at slow speed prepared to stop at next signal). We adjust our speed to a crawl and inch out of the tunnel at East Crossing and come to a stop before the red signal. The hogger explains that the Southwest Limited has caught up with us on the mainline and should be by shortly. Within minutes, with air horn blaring, shrouded Hudson No. 100 blurs across the diamond with eight WV built streamline cars in her wake. The signal blinks from red to yellow and No. 7 slowly snakes through the West and East mains and onto the Make-Break Track. At the West end, the Northern is uncoupled and run, ten-

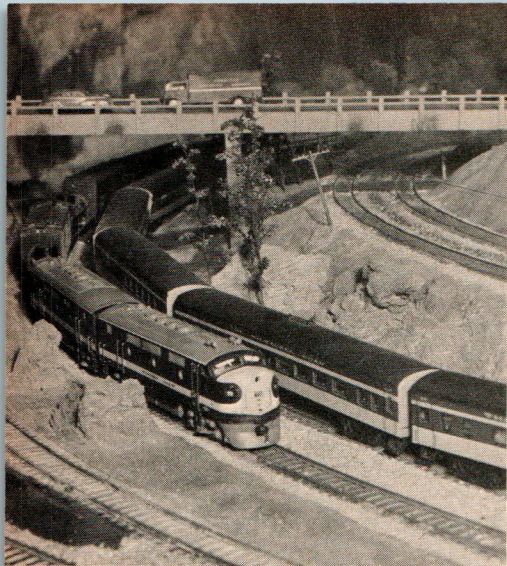
der first to the last Loco Storage Track and then run forward on the stub track for servicing. Later that night, the Northern will back up using the Make-Break Track to East Crossing, then forward past Cliff Yard Tower and by using East Bound Track to Cascade Yard, will be turned around ready to head a freight East from the yard.

Layout No. 1 was built for the main purpose of running high speed passenger and hot shot freights on well maintained double track mains.

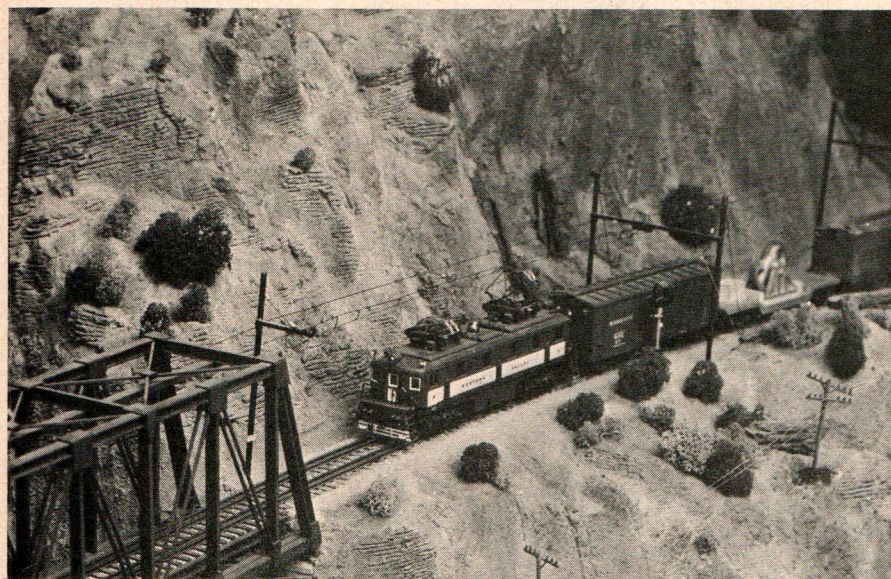
For one who grew up along the high speed main of the Milw Rd. between Chicago and Milwaukee, this was the logical layout to have. The two sidings, plus the numerous switch-



WV ENG. DEPT. 11-6-50 RDP

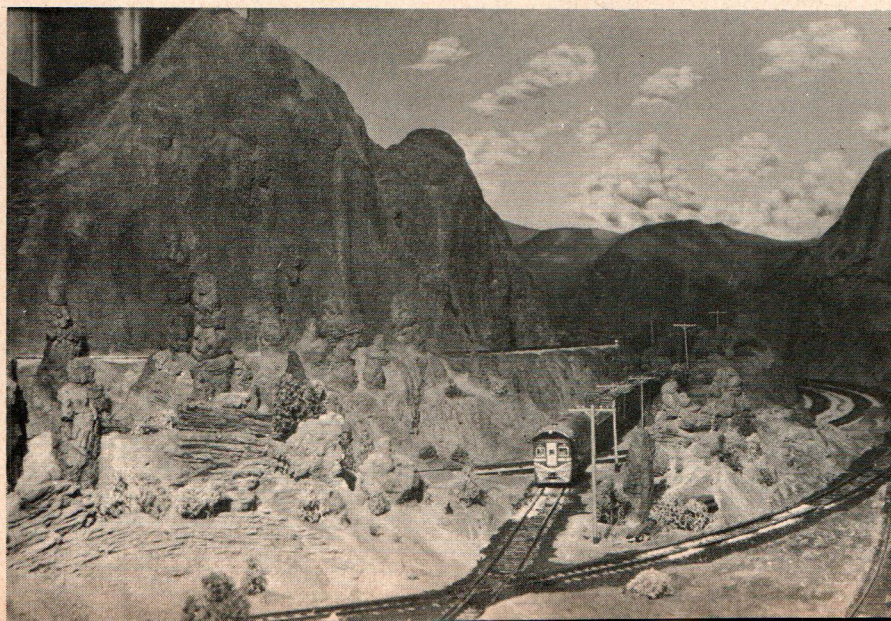


Wide curves were a feature of both Western Valley layouts and provided a pleasing complement to the long 80 ft. cars used on Western Valley passenger runs. Much equipment was Milwaukee Rd.



Heavy electric No. 3 begins its westward journey over the gantlet track in the high bridge mountain division. Western Valley management removed catenary in 1962 after two year test, in favor of straight diesel operation. Western Valley scenery was western.

Mountains were rugged, required over 600 pounds of plaster to make. Western Valley gave impression of depth rarely found on a model railroad. Diesel is model of first EMD MU road unit.



the steam Engine Wye.

Checking the track plan, we notice that the East Yard operator is hidden behind the gas furnace and cannot see the West Mainline Control operator who controls Barwind Tower. Thus when a train is ready to leave East Yard, its operator flips a toggle, which turns on a flashing yellow light on the West Main panel. If all is clear, West Main operator flips a toggle, which operates the turnout and changes the normal signal indication from red to caution on the Outbound Yard Track B at Barwind Tower.

The East Yard operator also acted in the capacity of a Division Supt. If a train on High Bridge was exceeding the 25mph speed limit, he flipped another toggle, which lighted a red

flashing light on either of the Mainline Control panels. A set of Safety Rules was given to each operator and woe to him if he caused a wreck.

Back to our trip with No. 5. Our first stop is at Marshall Jct., where we set out a car for Thorton Mfg. Co. We then continue our trip through West Crossing to Greenwald Interchange, where we drop two empty hoppers and pick up three loads, which were brought from Tyska Mine by its switcher. Proceeding past Kass Jct., we now enter the East Main just before the Ice House Spur at Grand Falls. We pass Marshall Jct., East Crossing and then begin the curving 3% grade to the Gantlet Track and High Bridge. We have a green board all the way and as we come out of High Bridge Tunnel and over the massive stone bridge, our hogger points ahead where No. 73, the West Main freight waits patiently for us to clear the Gantlet. Now we start curving downward and slow to a crawl to take the interchange track past Tower AA and onto the West Main at Marshall Jct. We stay on this Main at West Crossing and stop at Fargo Siding to drop off 3 cars.

Then comes the long trip back to East Yard via the Gantlet and High Bridge. Coming down off the Gantlet, we swing onto the Inbound Lead and pull into East Yard. Here, No. 5 uncouples and heads for the Diesel House. The yard switcher then begins the task of sorting the cars. Might mention that when the Mainline operator is sending a train to East Yard, he flips a toggle, which lines up the Inbound Lead turnout and lights a flashing red light on the East Yard Panel.

Once the train enters the Inbound Lead turnout, it comes under the control of the East Yard operator.

Sometimes the East Yard did not have enough cars to make up a train to go to Greenwald Interchange, Fargo Siding or Grand Falls Yard; then the yard switcher pushed a car or two up to Barwind Tower, where they were uncoupled. The Grand Falls Terminal RR switcher with caboose was then sent from Grand Falls to Barwind Tower via control from the West Main Control panel, which could take over both yard controls per toggle switches.

No. 5 Diesel was completely destroyed with one of its passenger cars in a wreck off of High Bridge, just prior to complete abandonment of the WV in 1965. All track with benchwork from Grand Falls to Marshall Jct. has been torn up and tracks on the Gantlet portion over High Bridge, plus tracks at East Crossing have also been removed. Barwind Tower, plus buildings at Marshall Jct. and Grand Falls, have been sold and removed. Only a few locos and rolling stock remain to be placed in glass cases.

Someday another WV RR shall materialize, but for now, a prototype private car is taking up the time and effort once spent on the WV RR.

OPERATING RULES

Rules (Operating) For Passenger Engineers

1. Check engine thoroughly before signing Release Slip for Engine Yard Service Master.
2. Obtain "Scheduled Run Card" for train you are assigned to, from Station Master, upon arrival at passenger terminal.
3. a. Couple to assigned train as smoothly as possible without jerking and without endangering the lives on board.
b. Build up all possible drawbar slack for ease in starting long or heavy train.
4. Check departure time with Master Clock and study Scheduled Run Card.
5. Depart *exactly on time*, smoothly and with a gradual increasing of speed, obeying speed limit signs and signals.
6. Scheduled Stops must be approached with a gradual slowing down. Starting procedure to be same as 5.
7. Signal indications are to be obeyed. GREEN is clear, AMBER is caution, RED is stop.
8. In the event some of the cars are derailed, train is to be brought to a stop as quickly as possible without further damage to cars. A red Flare must be set out 523 scale feet from rear and from front of train. (In daytime, red flags may be used.)*
9. Emergency stop requires placing of flare 523 scale ft. from rear of train. (In daytime, red flags may be used.)
10. At the end of run, make written report on engine's performance and on any repairs that should be made and turn it over (with engine) to Engine Yard Service crew at passenger terminal.

Rules (Operating) For Freight Engineers

1. Check engine thoroughly before signing Release Slip for Engine Yard Service Master.
2. Obtain "Scheduled Run Card" for train you are assigned to from Freight Yard Master, upon arrival at Freight Lead-Out Track.
3. Couple to assigned train as smoothly as possible to avoid damaging cargo or livestock. Build up all possible drawbar slack for ease in starting long or heavy train.
4. Check departure time with Master Clock and study Scheduled Run Card. Cars to be dropped off will be at head end of train. Cars to be picked up will be placed at head end of train. Twenty minutes (scale time) will be allowed for dropping and picking up cars *at each siding*.
5. Depart *exactly on time*, smoothly and with a gradual increasing of speed, obeying speed limit signs and signals.
6. Scheduled Stops must be approached with a gradual slowing down. Starting procedure to be the same as 5.
7. Signal indications are to be obeyed. GREEN is clear, AMBER is caution, RED is stop.
8. In the event some of the cars are derailed, train is to be brought to a stop as quickly as possible without further damage to the cars. A red Flare must be set out 523 scale feet from rear and from front of train. (In daytime, red flags may be used.)*
9. Emergency Stop requires placing of flare 523 scale feet from rear of train. (In daytime, red flags may be used.)
10. At end of run, make written report on engine's performance and on any repairs that should be made and turn it over (with engine) to Engine Yard Service crew at end of Freight Lead-In Track.

NOTE: Engineer operating articulated locomotive must not enter a curve on double track when another train is approaching. The overhang of the articulated locomotive is too great for clearance.

Rules (Operating For Freight Yard Switcher

1. Obtain "Freight Car Consist" Card from Freight Yard Master and arrange cars according to order listed on card. Twenty scale minutes before train departure time, the cars assigned to that particular train must be moved to the Freight Yard Lead-Out Track.
2. As soon as an Inbound Train has entered the Freight Yard Lead-In Track the cars are to be switched by the Yard Switcher to the Yard Tracks for classification. Cars requiring major repairs or overhauling are to be moved to the Car Repair Tracks.

Rules (Operating) For Passenger Yard Switch Engineers

1. Obtain "Passenger Car Consist" Card from Station Master of Passenger Terminal and arrange cars according to order listed on card. Twenty scale minutes before train departure time the cars assigned to that particular train must be moved to the Lead-Out Track at Passenger Terminal.
2. As soon as an In-Bound Train has entered the Passenger Terminal, the cars are to be switched by the Yard Switcher to the Yard Tracks for cleaning, minor repairing and arranged for the next trip. Cars requiring major repairs and overhauling are to be moved to the Car Repair Tracks.

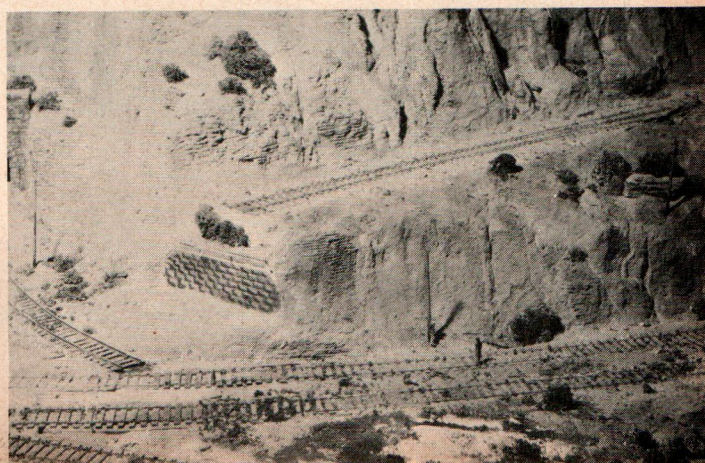
Duties of Engine Yard Service Master

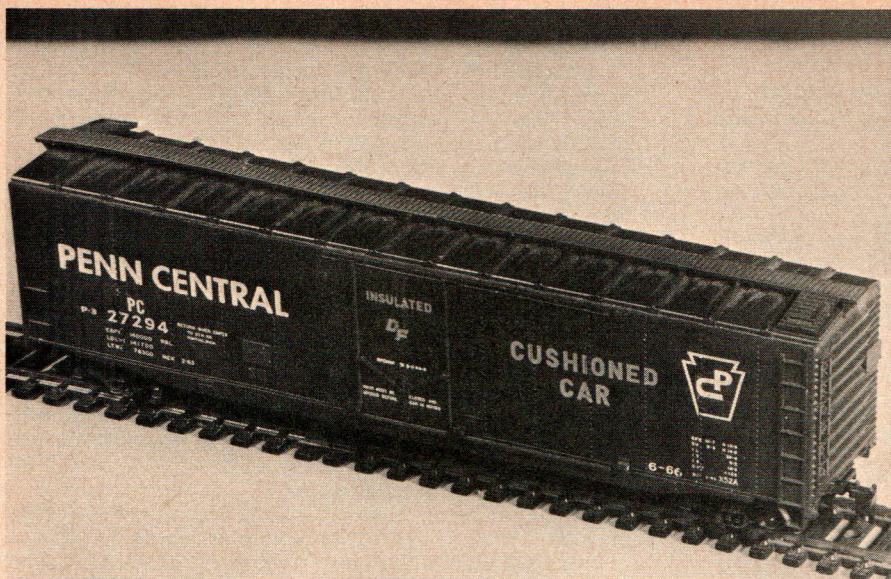
1. Store engines according to classification (Passenger, Freight, Switcher, Repair, Scrap) and in the numerical order in which they are to be used, repaired or scrapped.
Two tracks are to be used exclusively for passenger engine storage; two tracks are to be used exclusively for freight engine storage; one track is to be used for switcher storage; one track is to be used for engine repair and one track is to be used for engine scrapping.
2. "Release Slip" signed by Freight or Passenger Engineer requesting engine for scheduled run, must be permanently filed according to engine number in the Engine and Car Records File.

Restrictions of Equipment

1. It is the duty of the Dispatcher to advise all engine crews of restrictions imposed on any equipment due to flanges, radii, rail weight, clearance, or other limitation. Crewmen operating such equipment in restricted areas, causing derailment or wreck shall be subject to whatever disciplinary action is required.*
- *A) In the event of a collision involving two trains, both engineers must appear before a Board of Inquiry which shall determine the cause, who is to blame, and the punishment to be meted out.
- B) All minor wrecks shall be investigated by the Division Superintendent in whose division the wreck occurred. He shall determine the cause, who is to blame and the punishment to be meted out.

The end of an era. Ties remain but almost all of the rails have been pulled up. It can be expected that the Western Valley will again someday resume operation with fast freights and limiteds.

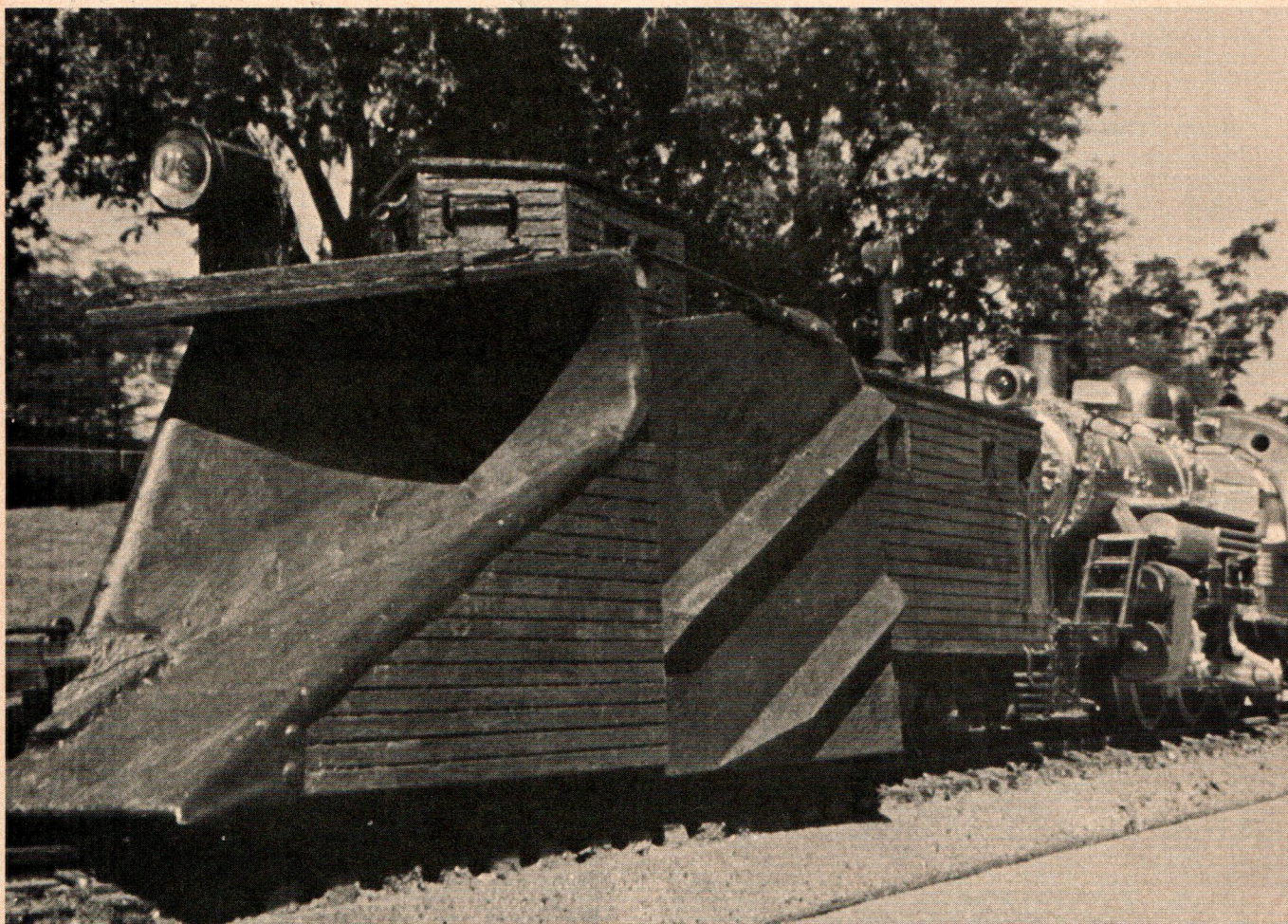




Robert Petterson, Box 199, Loma Linda, California, has dreamed up this version of the new merged PRR-NYC. Bob used an Athearn PRR plugdoor car and used a pencil eraser to remove the lettering where it had to be replaced. Now lets see what the real merged road will do probably starting some time this summer.

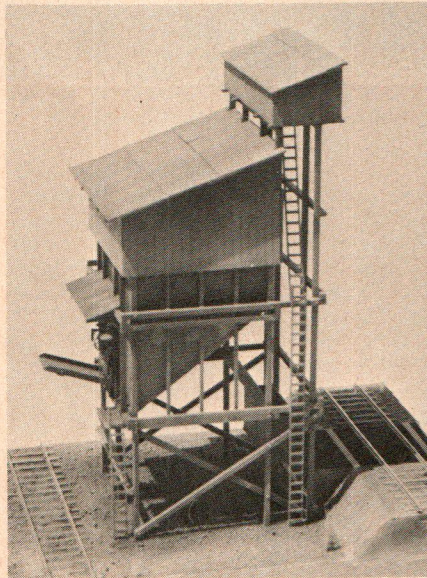
Boomer Trail

We invite all readers to submit photos of their layouts for publication in the Boomer Trail. Photos must show good modeling and originality. We pay \$5 or more for all non-commercial photos used here. Send photos size 4x5 or larger to the Editor, Railroad Model Craftsman, 6 East Main St., Ramsey, N. J.

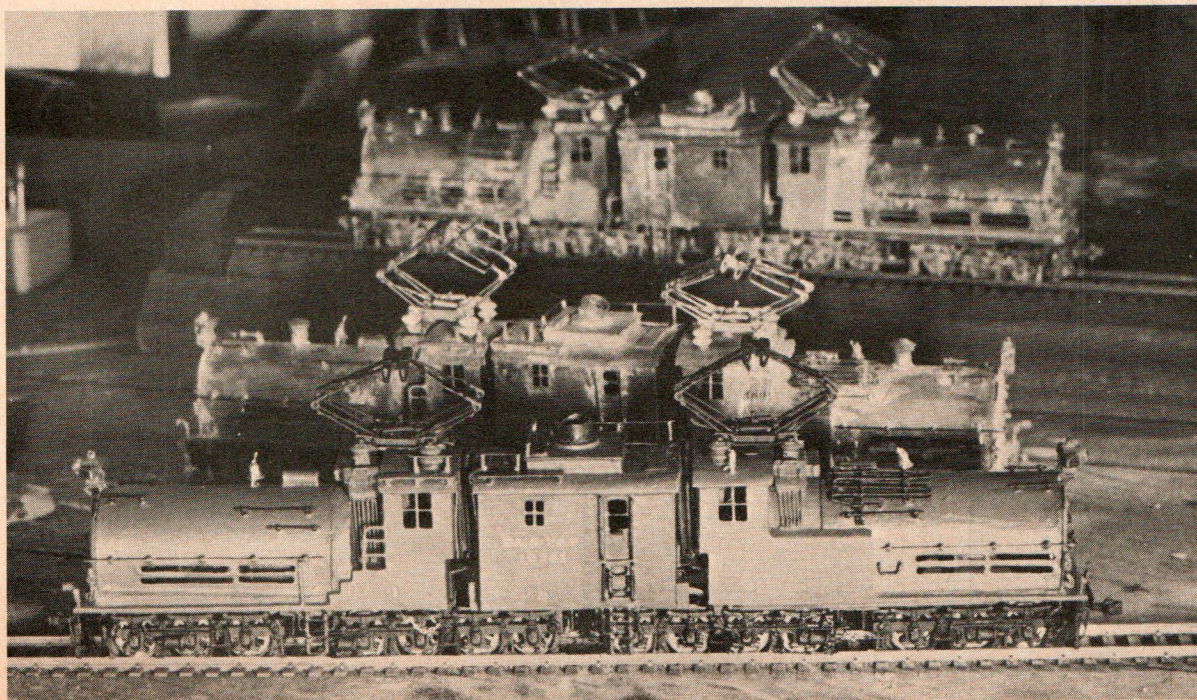


If you'd like to duplicate the perspective that George Stern, 421 Buffington Road, DeWitt, N. Y. 13224, put into this shot of his HO plow, follow his technique. He used a small tube and a 35mm. f:3.5 Auto Petri lens, with the trees far enough away, about 70 ft., to be in the same scale. A No. 71 hole in a thin piece of tin provided the depth of field of an F:64 stop. The exposure was 1/30 sec. in bright sunlight on Tri-X, Petriflex.

Scale models of the Milwaukee bi-polar electrics are rare but Francis X, Gruber has built himself three of the monsters as they looked when delivered from GE in 1919. The HO models have all axles powered with special Kemtron sideframes. Polk bulbs. Gruber's pike is at 386 Second St., Albany, New York.



Rob Corriston, Gayley Terrace, Media, Pa., 19063, copped six awards in the MER Reading model contests. Shown are his coaling and water towers which took 2nd and 3rd place in structures. There's also a view of his Hungry Horse Timber Company showing the partially completed servicing facilities. He admits its far from complete.



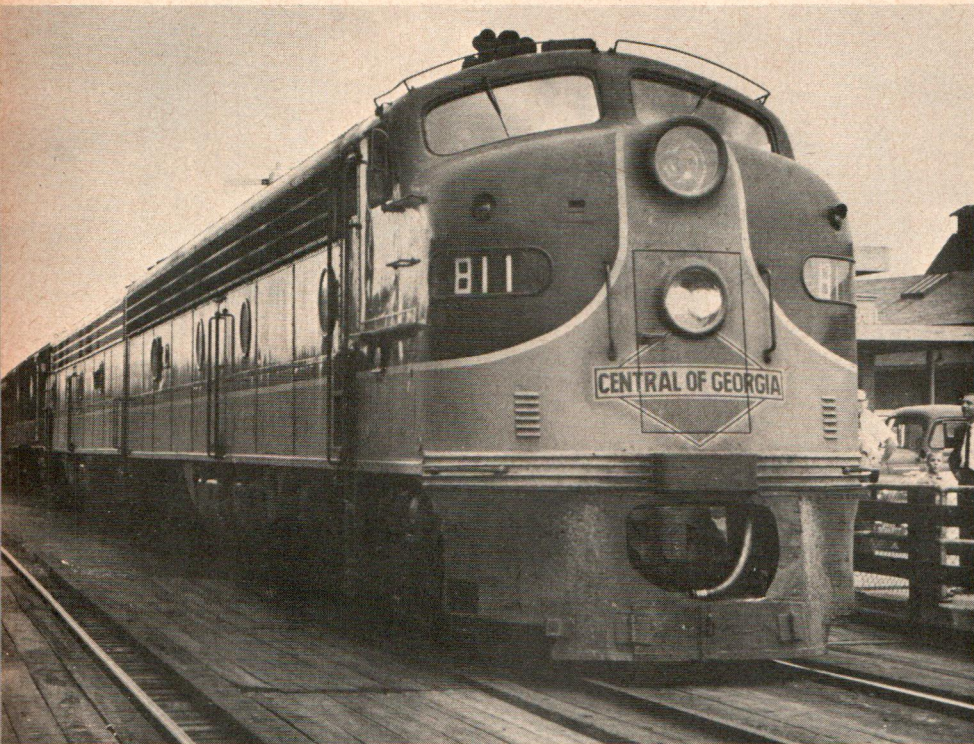
Leasing and Pooling

by Jim Boyd



Above: Leased Northern Pacific F-3 units coupled to a Burlington F-3 B unit, awaiting assignment to Chicago's busy Clyde yard.

Right: Atlantic Coast Line E-6 leads Pennsy Train 93 The South Wind out of Chicago, 800 miles from nearest ACL trackage.



Look again, it's a Central of Georgia E-8 decked out in Illinois Central's handsome brown and yellow colors for service in the Chicago-Jacksonville pool, but she's shown doing a turn on the Iowa Division Land O'Corn. Photo by Mike Shafer, Rockford, Ill.

THE flexibility of diesel locomotives has led to a number of interesting situations in prototype railroading: can you imagine D&RG GP-35's in Chicago? . . . Reading 424's in St. Louis? . . . Chicago & Western Indiana RS-1's in Winnipeg? All of these situations have been in the news in the last year, and many more like them are going on right now. They are brought about by leasing and pooling of diesel units to fill power shortages or to expedite trains.

These operations should give some good ideas to modelers who want variety in their rosters without ending up with a toy like collection of unrelated engines.

Locomotive leasing from one road to another is an old practice. Under government control in WW1, locomotives were shifted from one road to another with total disregard for tradition. During WWII similar power shifts were in evidence that saw such things as CB&Q 2-6-2's on the

SP in California, and DM&IR 2-8-8-4's on the D&RGW in the Colorado Rockies. In 1956 the Pennsy leased 13 Santa Fe 2-10-4's to serve with its own J-1's pulling coal on the Sandusky, Ohio, branch. The same year the Canadian National leased GTW 4-8-4's for its harvest rush, and the GTW in turn leased Illinois Central 4-8-2's and CB&Q 4-8-4's to fill its own power shortage. Why not just send the IC's and Q's to the CNR . . . they were too big to go through the St. Clair tunnel, which the small GTW 4-8-4's could. In 1959, the Nickel Plate killed its famous 2-8-4's with leased C&O F-3's, and the Colorado and Southern killed its 2-10-2's in 1960 with GN FT's.

Today it is common practice to lease units from one road to another. In 1965 I have seen B&M RS-3's on the CPR, C&WI RS-1's on the GTW, NP F-3's on the CB&Q, and Erie-Lackawanna F-3's on the Rock Island. The Rock Island seems to be the champion unit-lessee; in the last three years they have leased UP FA-2's, UP Alco switchers, GN FT's, DM&IR SD-7's, a Soo Line Baldwin road switcher, and the current E-L F-3's! The DM&IR has a large supply of SD-7 and SD-9 units that are idle during the winter when the lakes are frozen that it often leases out; but in the fall when steel mills are stockpiling, it leases other road's units itself.

What general conclusions can be drawn about leased units? Well, they are usually obtained to fill a temporary power shortage while awaiting new units or to fill seasonal peaks. Units filling a shortage when old units are traded in and new ones are not yet delivered are generally from close neighboring roads, but units leased for seasonal peaks are usually from quite far away because the sea-

Foreign locomotives often show up on trains and tracks of other railroads in pool service or as leased units during periods of peak operation, as much as 1000 miles from home.



sonal conditions normally effect all roads in an area making them all short of power. Engines obtained through leasing are generally older units that the home road can spare most easily. Another common practice is to lease units from roads controlled by the same financial powers, such as the KCS and CGW who frequently swap power back and forth.

One problem today is that railroads with cab signals and train controls can seldom lease units with compatible equipment, thus any leased units must be used only as boosters (trailing units). On the Rock Island, the Eries cannot be used in the lead between Chicago and Rock Island because of train control, but they can be used in the lead west of Rock Island where train control is not in use.

The practice of unit pooling is a product of the diesel age. Steam locomotives which required servicing every 150 miles, pretty much stayed on their home division; but diesels can cover entire railroads without servicing. The tremendous range of diesels and the fact that one road's units will multiple with another's, make it possible for the roads to combine units and completely eliminate engine changes on some trains. The object of a power pool is speed and efficiency; pool units are generally the newest available and run only on the hottest trains.

A classic pool is the arrangement between the Illinois Central and the M&StL (now C&NW) from Water-

Burlington U-25B's make up the lead and trailing units of a five unit power block including three UP GP-30's on the CD&I at Mendota, Illinois. This combination will head through to Ogden, Utah.

loo, Ia. to St. Paul, Minnesota. By combining the IC's Iowa Division from Chicago to Waterloo, the IC's branch from Waterloo to Albert Lea, Minn., and the M&StL main line to St. Paul, they made a very competitive route in the hot Chicago to St. Paul market. St. Paul bound freight leaves Chicago behind IC geeps and is set out, at Waterloo for classification. It leaves Waterloo behind mixed IC and M&StL geeps and runs straight through St. Paul eliminating the engine change at Albert Lea. IC cabooses are run all the way. This operation makes a very colorful sight, with black and white IC geeps mixed with yellow and green M&StL's

One of the most interesting power



Above: L&N GP-30's in Chicago-Atlanta pool are serviced at C&EI yard at Dolton, Ill. Steam power rarely operated so far from home.



Right: ACL E-6's spend a cold night in the Pennsy's 16th St. diesel house, readying for the morning South Wind run to Florida.



Leased Chicago & Western Indiana RS-1 sits beside leased Central Vermont GP-9 in Grand Trunk Western's yard in Chicago. Both GTW and CV are Canadian National controlled and often swap power.

pools is seen on the CB&Q's hotshot CD (Chicago-Denver, westbound) and LW-68 (Lines West-68, eastbound) operated in conjunction with the D&RGW. These trains run from Salt Lake City to Denver over the Rio Grande and on into Chicago over the Burlington. Both roads use GP-30's and -35's in this service, and since the Burlington end of the run is by far the longest, it contributes about $\frac{2}{3}$ of the engines to the pool, and the Rio Grande the remaining $\frac{1}{3}$. The units on any given train are seldom mixed, but every third train will have Rio Grande units.

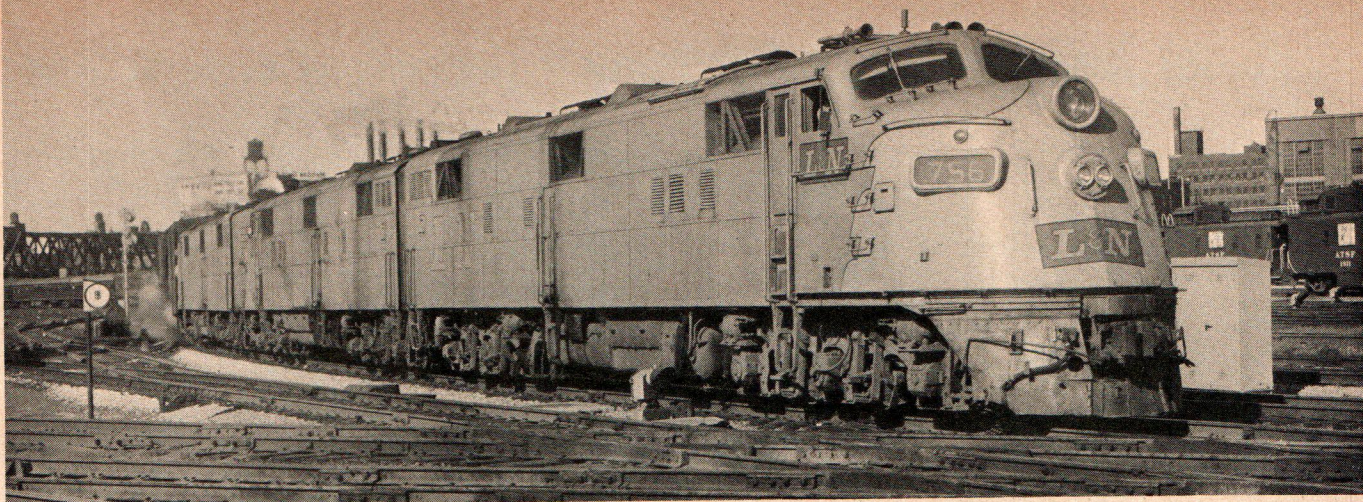
The Burlington also has a pool with the Union Pacific on the CGI (Chi-

cago-Grand Island, westbound) and GI-68 (Grand Island-68, eastbound) where they run from Ogden, Utah to Chicago transferring UP to CB&Q at Grand Island, Nebraska. Both roads run mostly GP-30's in the pool, although the Burlington also runs its six U25B's. This pool differs from the Rio Grande pool in that both UP and CB&Q are equal contributors; and the units are run mixed, with red and white Burlington's MU'd with yellow and gray UP's.

Now comes the fun! Q-D&RGW LW-68 and Q-UP GI-68 both arrive in Lincoln, Neb., from the west about the same time, and are often combined into Chicago carrying all Rio

Grande units, mixed Q and UP units, or a mixture of all three! They return to Lincoln as CDGI and split from there west. Although the Rio Grande pool is only about a year old, I've seen the CGI pool as long ago as 1960. With so many foreign units on the line, it's not uncommon for things to get fouled up by mechanical trouble and find stray UP or D&RG units on other than the pool trains to balance or transfer power.

The Chicago and Eastern Illinois and Louisville and Nashville have a pool between Atlanta, Ga., and Chicago on a piggyback hotshot where they mix GP-30's and -35's of both roads. These roads also have a passenger pool between Atlanta and Chicago on the Hummingbird-Georgian which operates alternately with pure L&N and mixed C&EI and L&N units.



Louisville & Nashville E-6 leads C&E No. 93-5 The Hummingbird-Georgian across 21st St. interlocking in Chicago. L&N's will run to Atlanta.

It is quite unusual for roads to have both freight and passenger pools between the same points. The Union Pacific has both freight and passenger pools into Chicago, but the freight run over the Burlington, and the passengers over the Milwaukee Road. The UP and Milwaukee mix E-units on the Chicago to west coast "Cities" streamliners, in fact, the Milwaukee completely changed its entire passenger paint scheme to match the UP trains.

The Chicago to Florida runs involve several interesting pools, the ACL - L&N - Pennsy, South Wind, and the ACL - C of Ga. - IC, Seminole. The South Wind is an every other day Chicago to Miami train that operates with a Pennsy - ACL power pool. At any given time there two South Winds on the road, one northbound and one southbound; one with Pennsy units and the other with ACL's. The units run without change from Chicago to Jacksonville, Florida, and its bit of a shock to see ACL E-6's in Chicago, 803 miles from the nearest ACL tracks,—or Pennsy E-8's in Jacksonville!

The Central of Georgia contributed two E-8's to the Illinois Central's Seminole pool to run from Albany, Ga., to Chicago. The IC is very conscious of the neat appearance of its orange and brown trains, and those red, blue, and black C of Ga. units clashed a bit too much with the IC colors, so C of Ga. E-8's 811 and 812 were repainted in orange and brown with Central of Georgia lettering—even in the IC green diamond herald! These units are sometimes seen together, but more often they are mixed with IC power. Occasionally, due to a power shortage in Chicago, they get cycled west on the Iowa division.

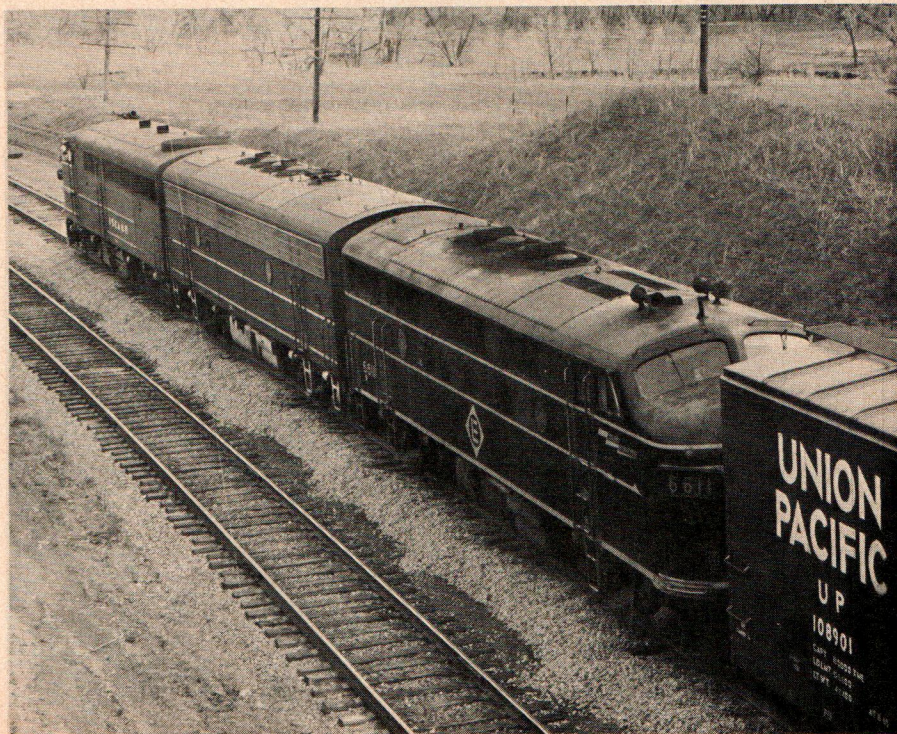
There are many other pools, but these should give you ideas for some interesting modeling possibilities.

Erie Lackawanna F-3 unit, far from home, trailing a pair of assorted Rock Island growlers through Wyanet, Ill. CRI&P unit must head train because special Rock Island train control equipment.



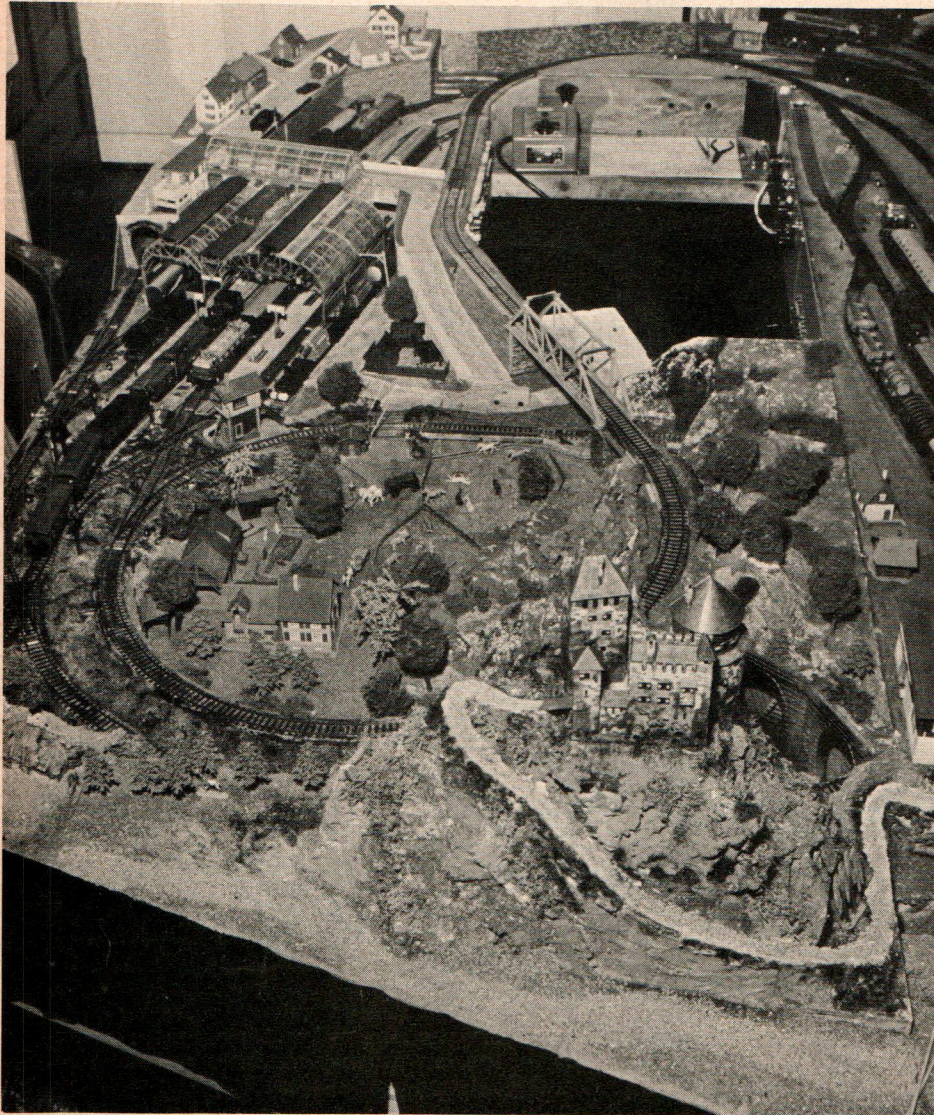
Closeup of colorful Burlington red and white unit running with yellow and grey Union Pacific power on the CDGI at Mendota, Ill.

Photos by author unless otherwise credited.



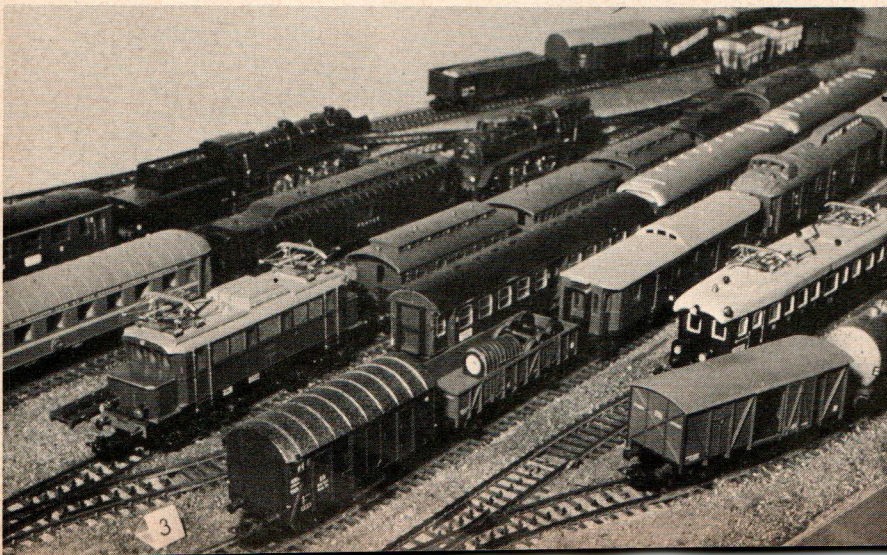
Model Railroading In Germany

as built by Peter Schmidt



Aerial view of Peter Schmidt's HO layout which measures about 13½ feet in length, and which is still far from complete. Layout is modeled after German Federal Railway System although rolling stock includes cars from many different European railway systems.

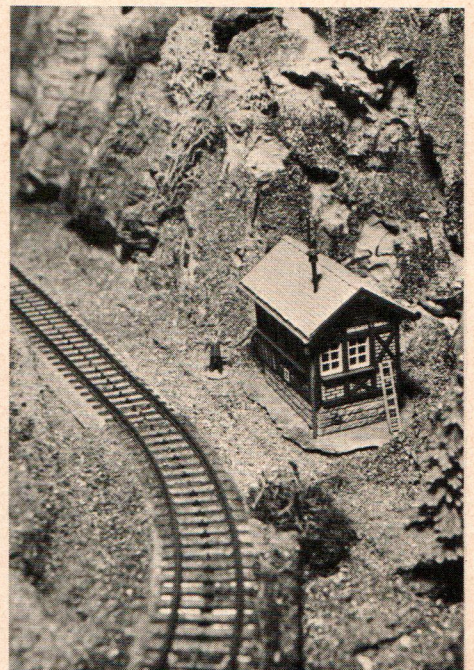
St. Jurgen terminal is loaded with equipment. Generally shorter cars of European roads, including many 4-wheeled cars, permits use of sharp radii curves, low numbered turnouts. Track shown is commercial!



WHILE SOME European modelers have American style layouts, or perhaps a trainload of U. S. style equipment, it follows that most Europeans prefer to model the type of equipment which runs in their own country. The HO layout of Peter Schmidt, of Hamburg, is perhaps typical of many which can be found throughout Europe, from Sweden in the north right down into the southern tip of Italy and from the shores of France right through the Iron Curtain into Yugoslavia, Czechoslovakia and Poland. Uncle Eric didn't turn up any HO in his Russian travels (RMC Dec. 1963) but we suspect there must be at least some HO layouts in the U. S. S. R. as well.

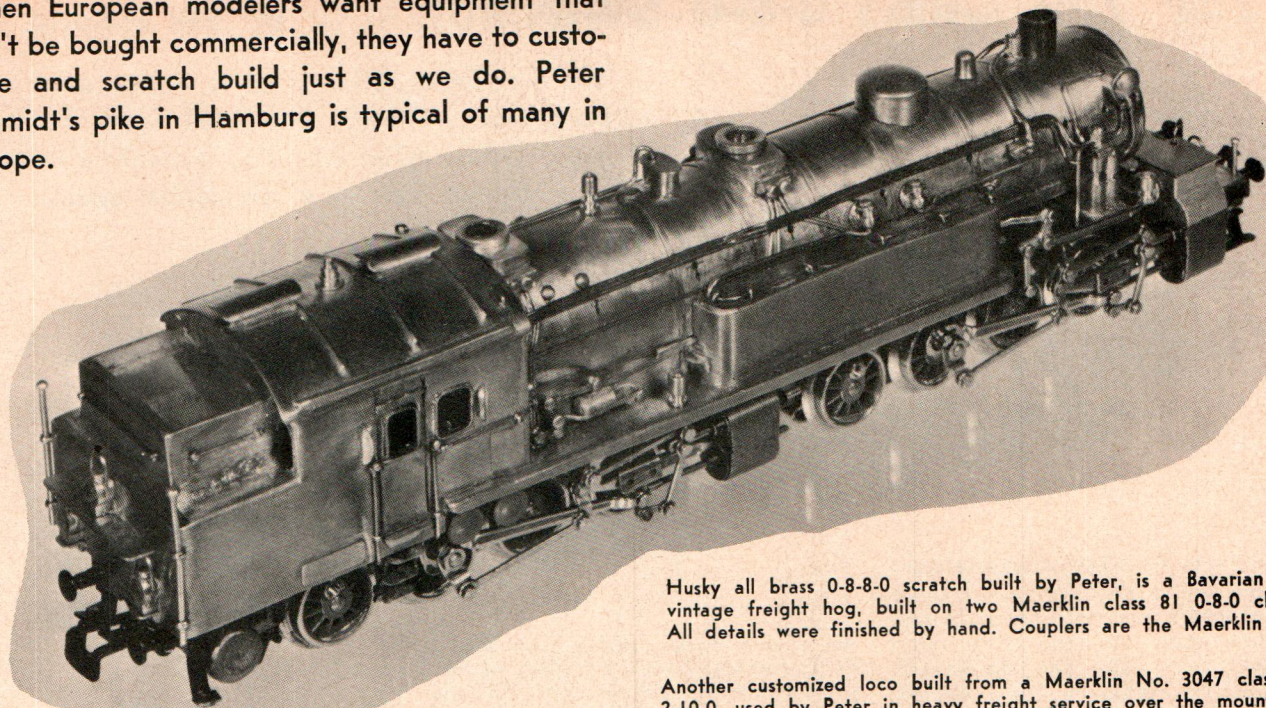
Peter's layout is quite large, stretching 13½ feet long, and uses Maerklin stud contact (3-rail) track, having the general appearance of two rail but equipped with a series of stud contacts down the center of the track for pickup. Peter is thus able to avoid some of the problems which 2-railers face: track gapping, pickup, and dead spots. Maerklin's recent release of some 2-rail locos under their Hamo label might change some thinking. Other European proprietary brands offer their equipment in 2-rail and some offer a selection in either 2-or 3-rail.

The supply of kits and ready to run equipment is excellent and in a wide variety of prices. Not so plentiful are the real craft kits.



Stud contact strip in Maerklin track has replaced old time center third rail. Some Maerklin locos are now available in 2-rail under Hamo label. 3-rail system offers wiring advantages.

When European modelers want equipment that can't be bought commercially, they have to customize and scratch build just as we do. Peter Schmidt's pike in Hamburg is typical of many in Europe.



Husky all brass 0-8-8-0 scratch built by Peter, is a Bavarian 1913 vintage freight hog, built on two Maerklin class 81 0-8-0 chassis. All details were finished by hand. Couplers are the Maerklin type.

Another customized loco built from a Maerklin No. 3047 class 44 2-10-0, used by Peter in heavy freight service over the mountains. Water tanks, coal bunker, trailing wheels were among a number of details which had to be added. Wheel flanges are European standard.

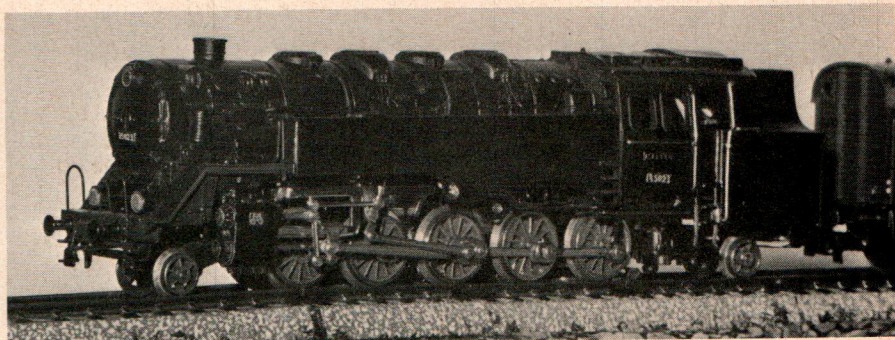
Modelers want locomotives not readily available in stores must make their own. Customizing is popular since the state railroads have standardized their designs to a great degree, making it relatively easy to revamp a locomotive into something else. To build a husky Bavarian 0-8-8-0T freight hog, Peter had to hand craft the entire superstructure over a pair of Maerklin mechanisms.

European modelers also have their own model railroad organization, patterned somewhat along the lines of NMRA, in their MOROP. Much equipment is made to NEM standards, having a somewhat larger flange than the standard NMRA flange. Some modelers are exploring the area of fine scale.

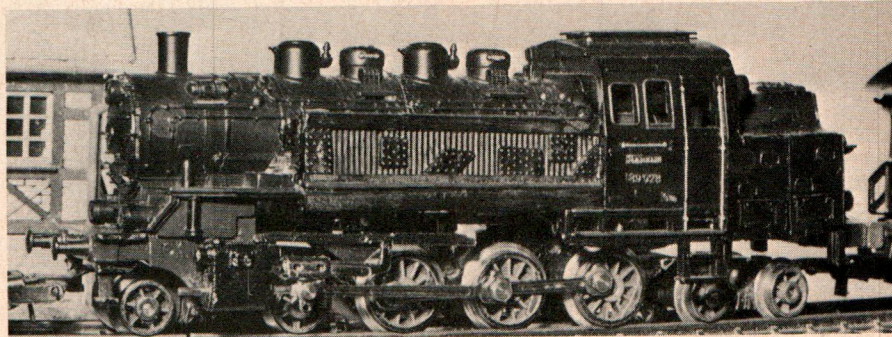
Most modelers center their interest in HO gauge equipment although N gauge interest is increasing. Several extensive lines of TT are available, and nobody will ever be able to make the O gaugers think small.

Variety is injected by operating equipment of other countries. Many passenger trains are international runs, and interchange of freight cars is common. Many freight cars are small 4-wheel types and even some passenger cars are small with 4 or 6 wheels, permitting use of sharp radii curves. There are also long cars of 70 feet creating strong contrasts. Several European firms offer working catenary systems for use with their electric locomotives.

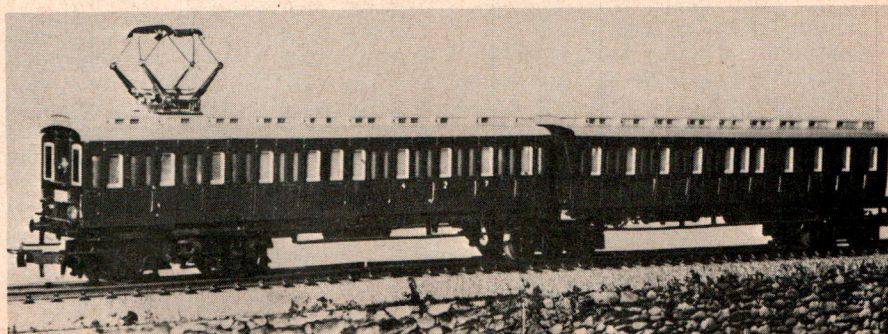
There are also a number of model railroad magazines printed on the continent including *Rail Miniature Flash* (France), *Italmodel* (Italy), *Minaturlbahnen* (Germany), and *Der Modelleisenbahner* (East Germany.)



Several Maerklin switchers were used to create this class 78 4-6-4 tank loco used in passenger service. Stud contact is used for pickup.



Hamburger Stadtbahn, old time electric MU train, was converted from a pair of Liliput coaches. Lead truck is powered. Design is quaint.



ATSF 789 Class 0-8-0 Switcher

by Bill Schopp

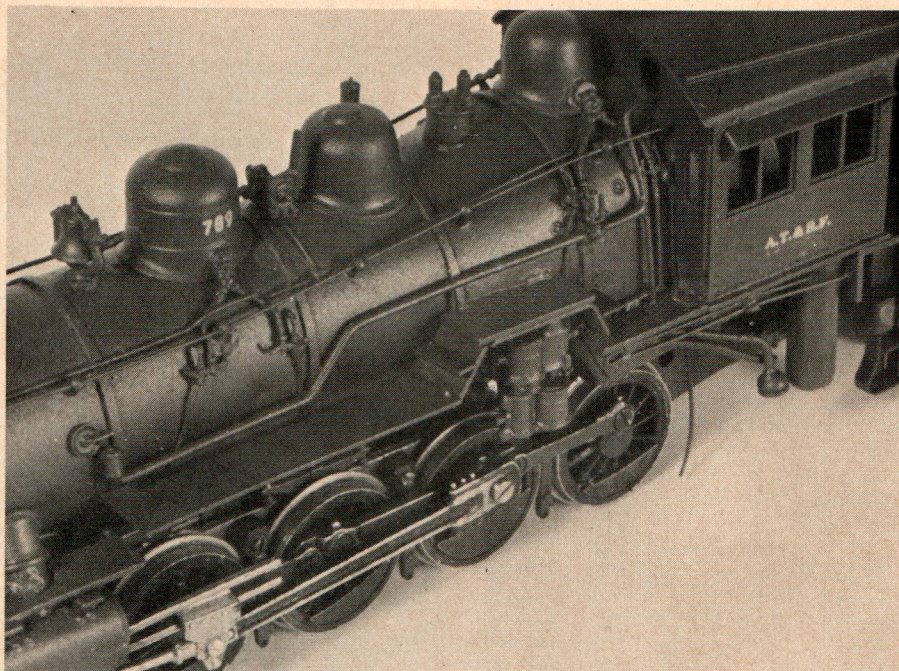
Model photos by Jim Albanowski. Prototype, photo from Dean Hale, courtesy SRHS.

The old Cross Kitter is at it again, combining parts from a Pacific Fast Mail Santa Fe 2-8-0 and a Balboa ATSF Atlantic, to create a loco not currently available in a commercial model.



The author's model combines parts from a Pacific Fast Mail 2-8-0 and a Balboa Atlantic, blended together with Kemtron, Cal-Scale, and other parts to create a Santa Fe 0-8-0 789 class switcher.

Closeup detail of boiler and cab of author's 0-8-0.



soldering tweezers, though you'll be wise to check to see if you have an engine which has the dome screwed in from inside (you can't unsolder screwed on fixtures).

The real shock was the running boards, which both had to be lowered to agree with the bottom of the cab. This meant also lowering the air pump. Before doing this, I removed the various piping from the sides of the boiler. This was later reinstalled. I actually found it easier to cut new running boards from Kemtron photo-engraved diamond tread stock, and solder them in place.

There are short sections of running board atop the cylinders, cut to fit

around the steam pipes, to which they are soldered. The nastiest part to make on the engine was left till last, the open engine steps from the pilot beam up to the running board. After several false starts, one involving brass ladder stock, these were finally made by carefully bending up the four risers (2 for each side) to be the same shape, then soldering them, with tweezers, to the underside of the running board. Short pieces of Kemtron safety tread were then soldered to these risers for steps, as well as spacers.

No special treatment was required for the tender.

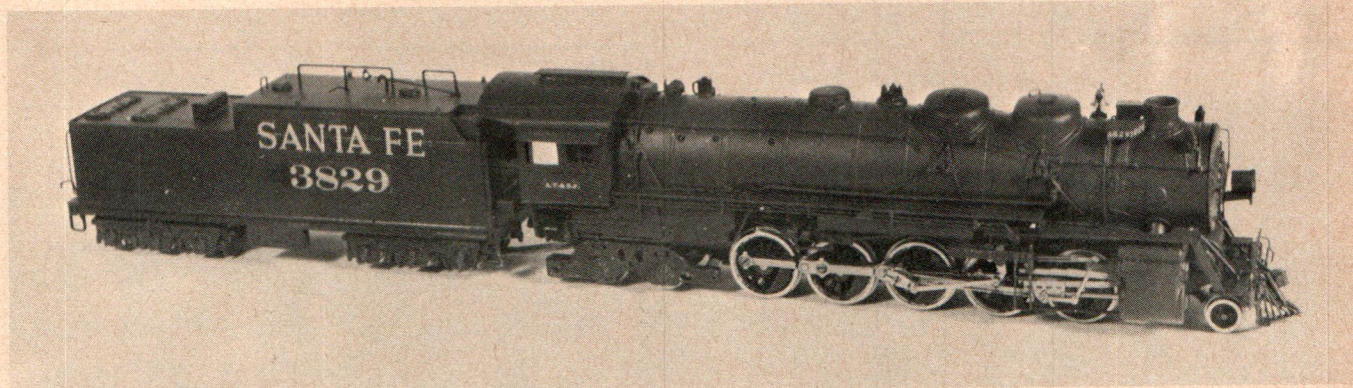
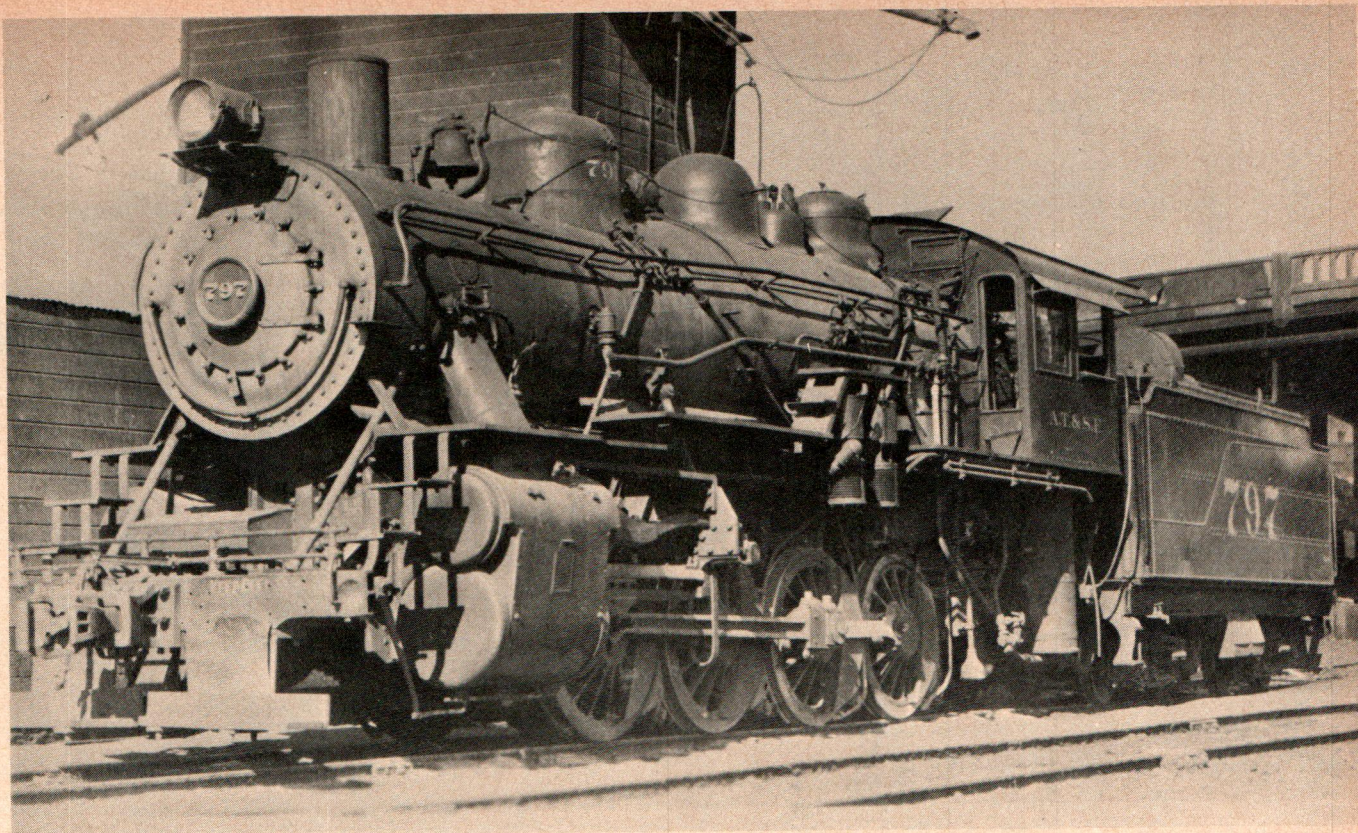
NOW, this left me with an Atlantic

THE Santa Fe 0-8-0 switcher always seemed to me to be one of those easy cross-kit engines one could toss together with one hand some rainy Sunday. Just take the mechanism from a PFM Santa Fe 2-8-0, remove the lead truck and valve gear, and move the pilot back. Then take the superstructure from a Balboa or MDC Santa Fe Atlantic and fit it above the mechanism. Use the tender from either engine. And there you'd be! After all the prototype Santa Fe created many of their 0-8-0's by just that method—mating an Atlantic boiler to an ex-consolidation frame.

Sunday afternoon? Ha! It took a lot longer than that to get a reasonable model of the 789 class 0-8-0. First off, when the consolidation mechanism was stripped, I found that the model did not need outside valve, the prototype having Stephenson valve gear inside. So off came the consol valve gear. Double guide cylinders were wrong, so I switched the Balboa Atlantic cylinders to the consol frame, taking care that the piston lined up with the driver axle centers and the steam pipes with the stack. Cross-head naturally had to be changed, too. Very little moving back of the pilot was needed.

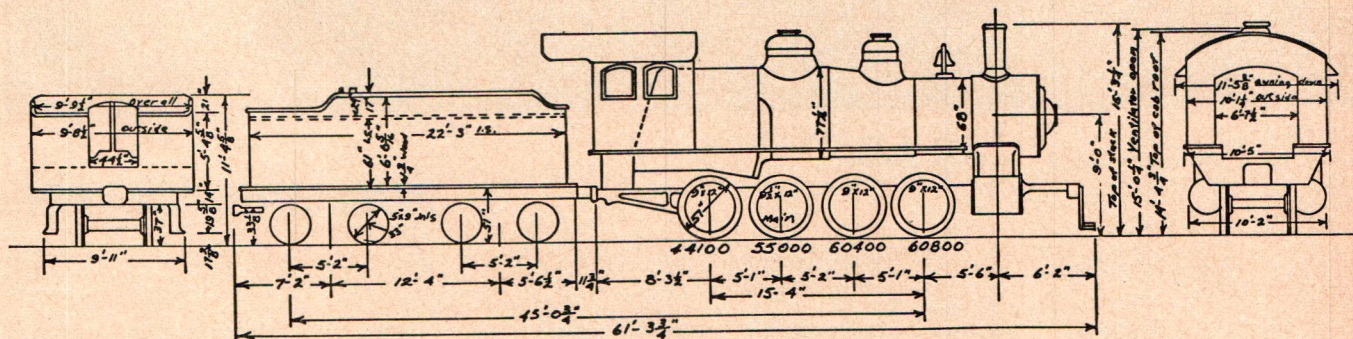
Fitting the Atlantic superstructure atop the 2-8-0 mechanism showed that it was too long. Hence, the cab had to be loosened and moved forward on the firebox to get approximately the right length, then resoldered. A new attachment for the back of the superstructure was devised from that part taken from the consolidation being utilized.

Relocation of boiler fittings was also necessary as per the one prototype photo available, these were: headlight (same); stack (same); bell; front sand dome; generator; steam dome; pop valve cluster; and a new second sand dome (Cal-Scale sander valves added). The second sand dome came from some other boiler in my scrap box. Domes and other fittings may be moved around atop a boiler easily if you have a set of carbon electrode



Prototype 789 class 0-8-0 from Dean Hale collection, courtesy SRHS. Openwork engine steps are difficult to model. Fittings of different locos in the class probably varied from one engine to another.

Interesting by-product of above conversion to 0-8-0 was the 1917 vintage 2-10-4 created from a battered Santa Fe 2-10-2 given a complete overhaul. Rear of frame had to be cut to clear truck.

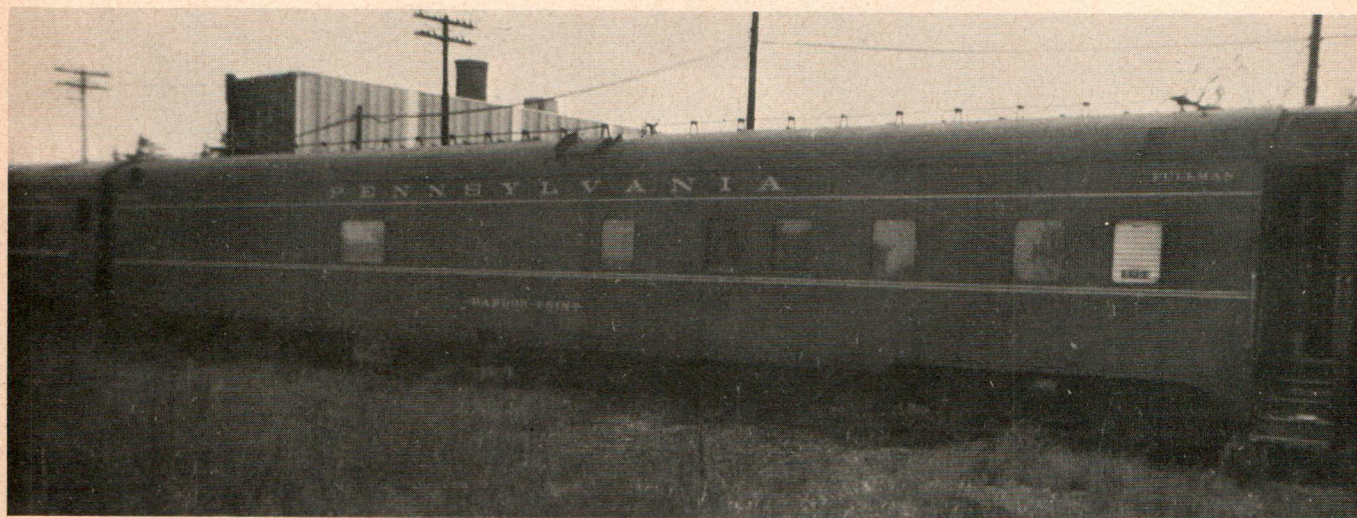
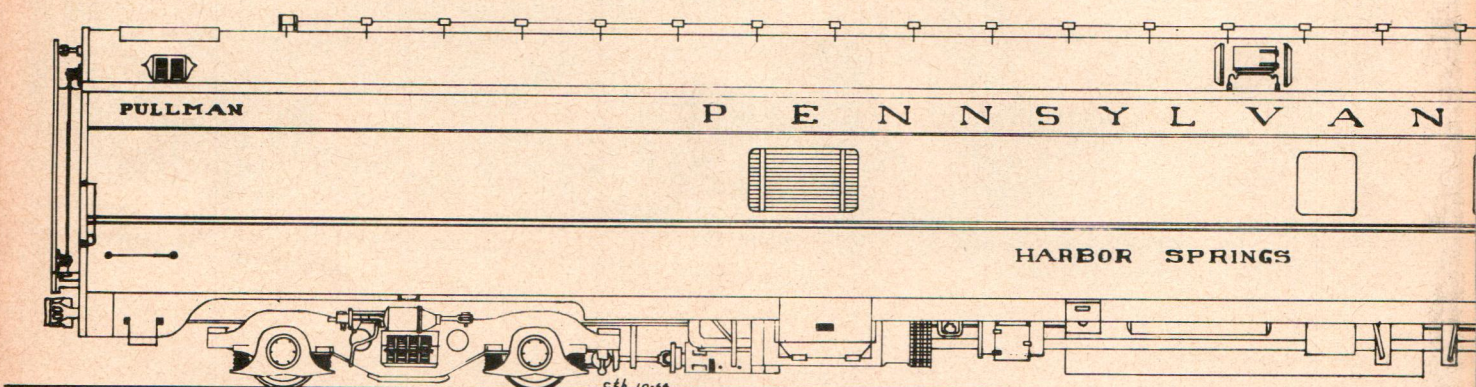
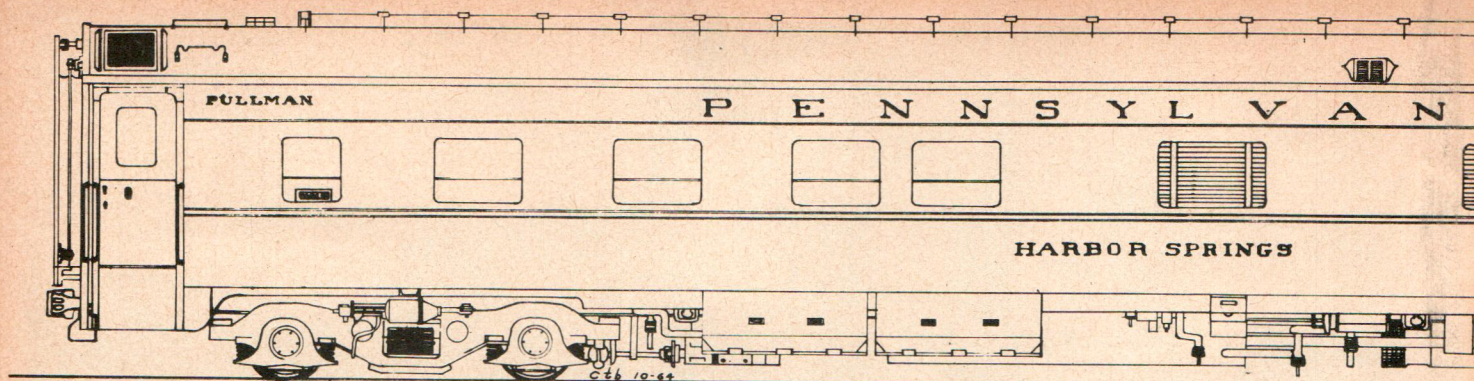


ATSF diagram of 789 class 0-8-0 varies widely from photo, probably adapted from 2-8-0 diagram. Data courtesy Southwest Railway Hist. Society.

mechanism. This, with new drivers, was used under a CRRNJ 4-6-0 camelback superstructure to make a 4-4-2 camelback. I was also left with a consolidation superstructure. So far the square cab from this has been

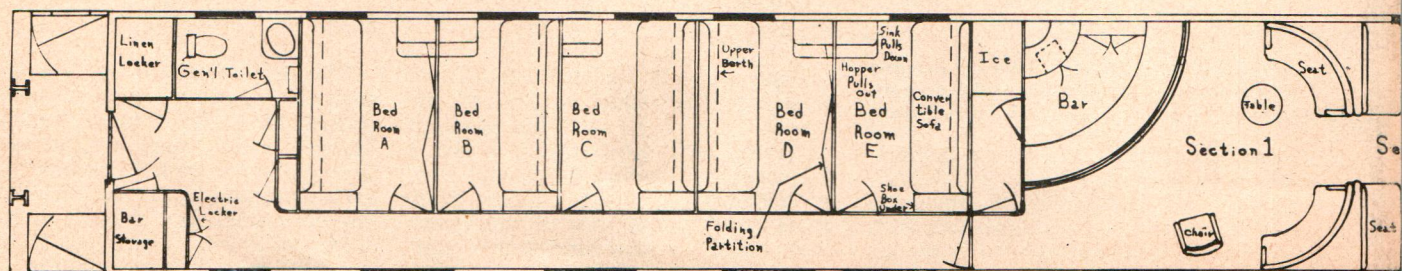
transferred to a Santa Fe 2-10-2 to back-date the model to one of the earlier ones. I cut out the back of its frame so I could install a Santa Fe Berkshire trailing truck, and added drifting chambers (made from brass rod) to the tops of the cylinders. Ergo, the very first 2-10-4, dating to 1917, the #3829.

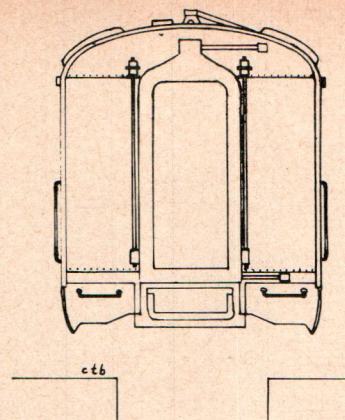
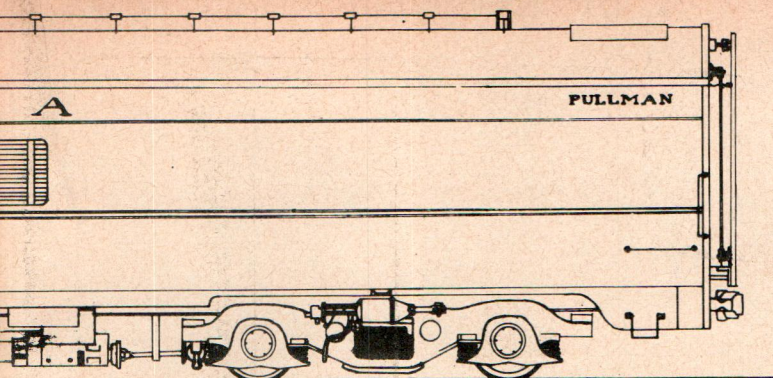
This at present leaves me with a consolidation superstructure and cylinders, less cab; a loose slope-front "sports model" cab; and in another drawer, a cab-less Berkshire superstructure; and one short tender from the consolidation. I'll have to go into a Brown Study to see just what can be done with this assortment.



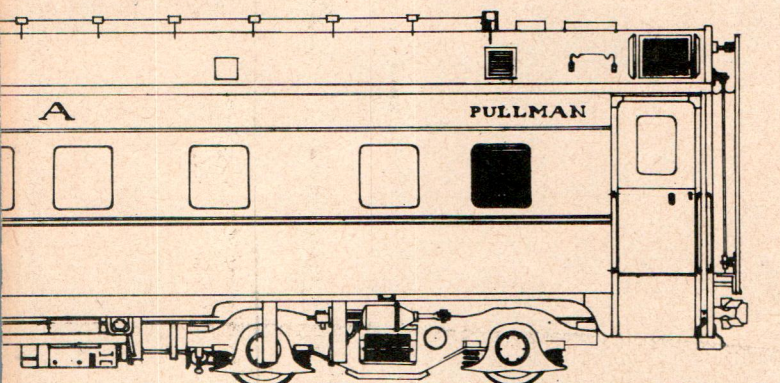
Pennsylvania Railroad's Harbor Point, sister car to Harbor Springs as it appeared at Altoona, Pa., awaiting disposition. Cars were built for Broadway Limited; once boasted bath, barber, secretary.

PULLMAN SLEEPER:





Drawn by Craig T. Bossler



Two cars made up the Pennsylvania's 5 double bedroom-bar-lounge-series, built for the Broadway Limited's 1938 consist: Harbor Point and Harbor Springs. Data collected on field trip to Altoona in Sept. 1964, at which time both cars had been withdrawn from service and were awaiting disposition.

No. 28. BROADWAY LIMITED
(Except Nov. 25, Dec. 24, 25 and 31)
All Private Room Train

Lounge Car (Bar).....Chicago to New York (5 Double Bedrooms) (Train Telephone).

Sleeping Cars.....Chicago to New York (10 Roomettes, 6 Double Bedrooms) (Two Cars).

Chicago to New York (4 Compartments, 2 Drawing Rooms, 4 Double Bedrooms) (Two Cars).

Chicago to New York (12 Duplex Rooms, 4 Double Bedrooms).

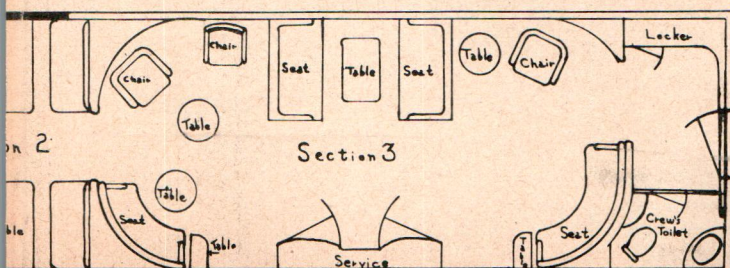
Chicago to New York (11 Double Bedrooms) (Operates odd dates in Oct., Jan. and Apr.; even dates in Nov., Dec., Feb. and Mar. Will not run Nov. 24 and Dec. 30).


Observation Car (Bar Lounge).....Chicago to New York (2 Master Rooms, Double Bedroom).

Dining Car.....Chicago to New York.

No Coaches or checked baggage Chicago to New York.

5 DBL. BEDROOM, BAR, LOUNGE — PRR



ONCE A member of the Broadway Limited fleet, Harbor Springs was one of two such cars which ran in the 1938 edition of the Pennsy's No. 1 train. Originally these two cars, Harbor Springs and Harbor Point were equipped with two double bedrooms, bar, lounge, and facilities for bath, barber and train secretary. Both cars were later converted into 5 double bedroom, lounge, bar cars. These cars were originally built with full depth skirts. In later years, these were shown for accessibility to the underside equipment and appear as such in the drawing. These cars were replaced in 1949 by Harbor Cove and Harbor Rest. It appears that industrial designer Raymond Lowey had something against windows in lounges, for one will note in the floor plan that the lounge at the blind end is without one window. The lounge adjoining the bar has but one window, while the smallest lounge, Section two has two. This car could easily be modeled using smooth plastic place mats available at five and dime stores for the basic side, using a paper punch to cut out the round thermo-pane corners and cutting the balance of the window out with a sharp knife. The only real problem would be finding trucks, although similar trucks are available in HO and O scales. Both Harbor Springs and Harbor Point have been retired from PRR service. 



Apple Cider Mill

by E. L. Moore

Autumn is cider time and a cider mill builds easily and provides a good, small revenue producer for your railroad. The author included full interior detail in his model.

FIG. 1

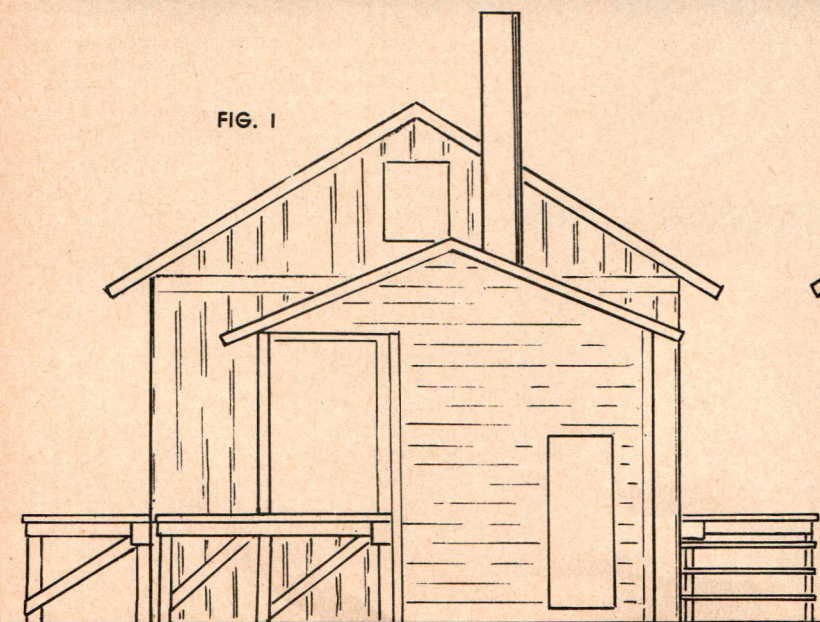
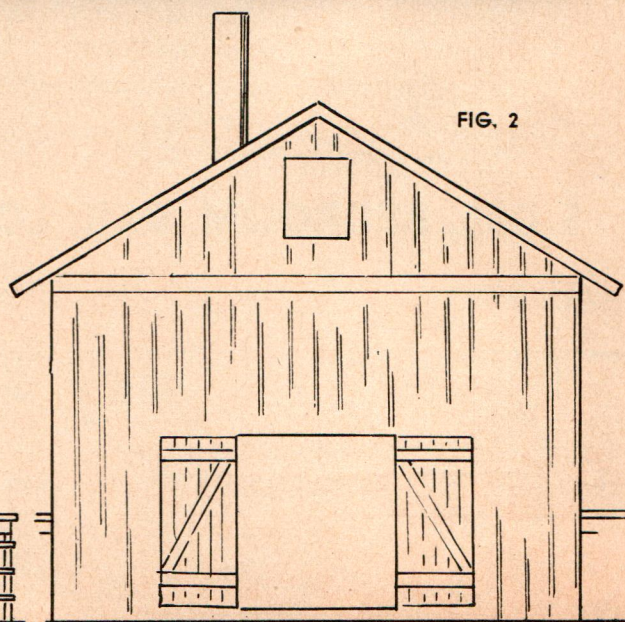


FIG. 2





LEFT—A farmer unloads crates of apples. All wood model has complete interior detail and is located on a rail siding. Structure has weathered look.

EACH AUTUMN, in the days of my youth in a little Michigan village, the old cider mill down by the tracks would come alive. Boards were ripped off doors and windows, cobwebs swept out and a fire lighted under the rusty boiler. Soon, load upon load of red and yellow apples would arrive and the old mill would go into action. Noons and evenings would find a few schoolboys lingering, cadging free drinks of sweet cider and selecting the best apples to stuff into

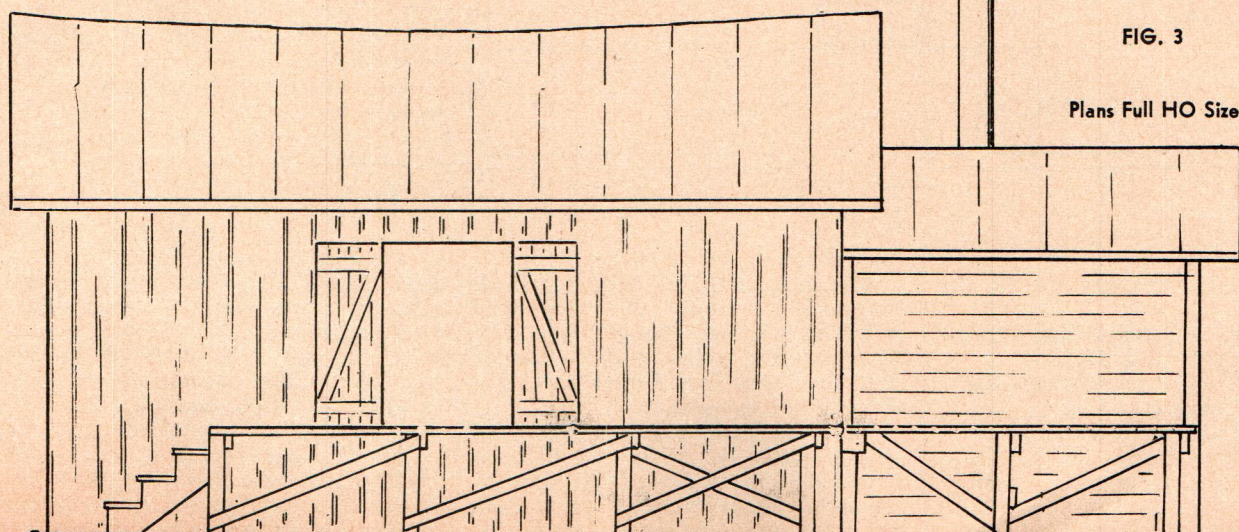
pockets and mouths. Quite soon, too, one could find his way to the mill blindfolded, his nose guiding him, for the pile of pomace as it grew larger and riper with the passing days spiced the air with the smell of fermentation and decay, attracting, too, a multitude of flies and bees.

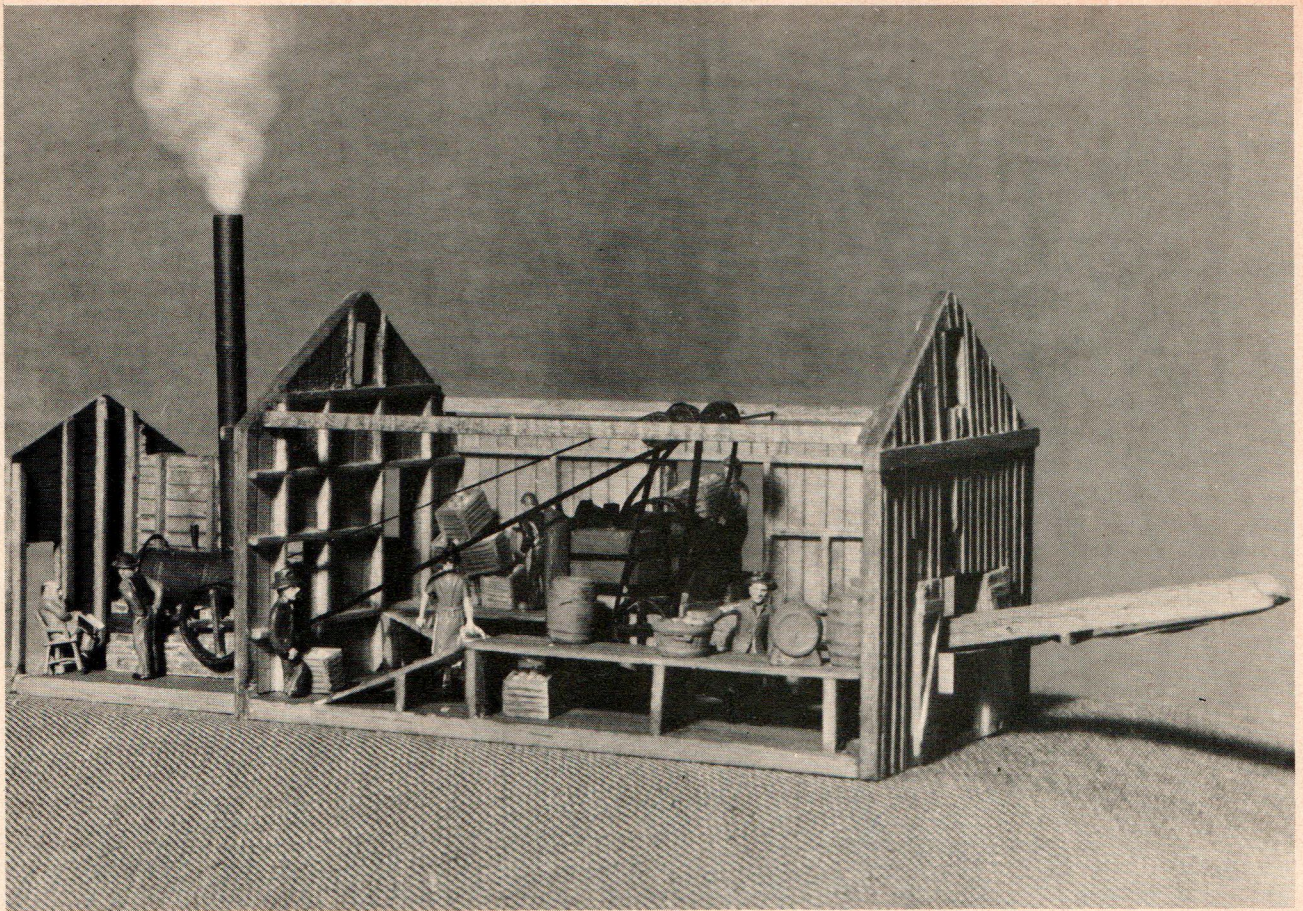
The old mill, somewhat sway-backed with age, was located on a siding and presumably the surplus cider was barreled and shipped to a pickle plant located in a not too distant town.

This is an easily modeled structure, Northeastern capped siding being used mainly with a bit of clapboard siding covering the boiler room an-

Apple cider in barrels awaiting shipment. Conveyor belt at right carries off pomace from apples, the ground mashy pulp left over from squeezing.

nex; or balsa for floor and roof. The apples you see displayed are readily obtainable at a food store under the name of Nonpareils, all colors in a little bottle for 15c, and being about the size of rabbit shot. Women folk use it on cakes and such. The barrels you can buy, but the crates you will have to make, and I shall describe the process later. The pomace is simulated by wet tea leaves although





Cutaway view shows details of interior modeling. Interior detailing is not essential but can make the difference between just another model and an outstanding miniature of the real thing.

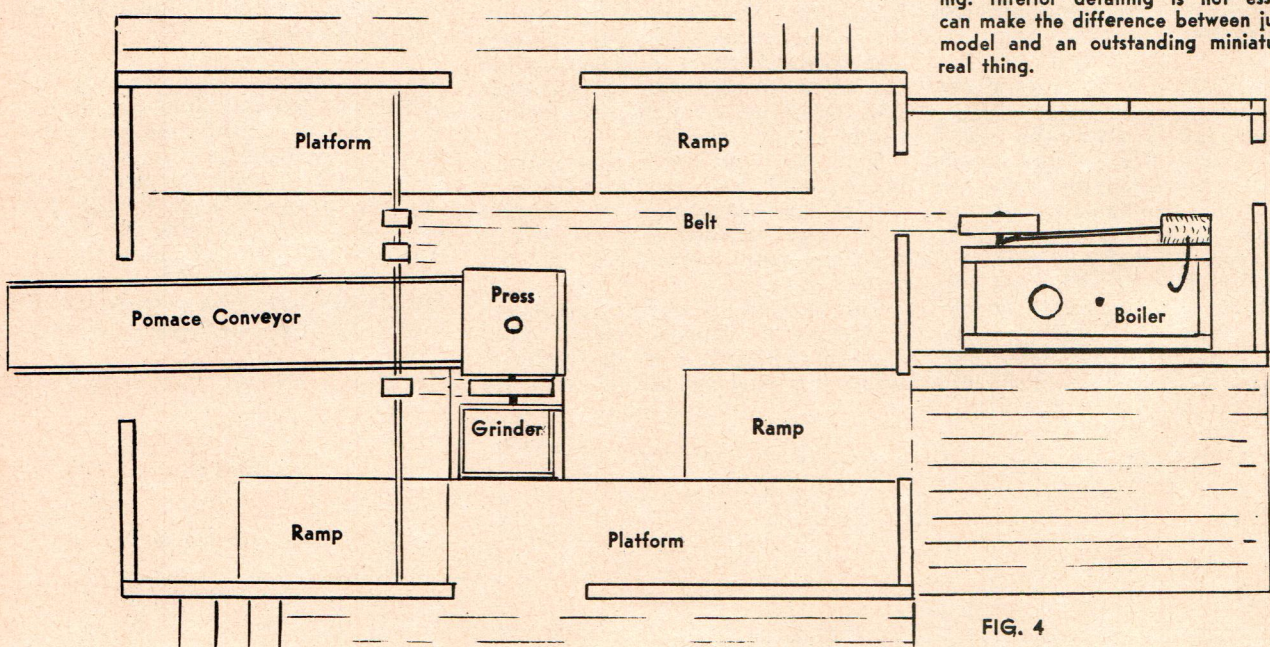


FIG. 4

tobacco would probably do equally well.

And here's a detailed list of what it takes to build it, in HO:

4" 1/16" clapboard siding	.15
9" 1/16" capped siding	.25
8" 1/16" x 4" balsa for roofs	.09
4" 1/32" x 4" balsa	.04
6" 1/8" x 4" balsa	.06
	<hr/>
	.59

Beginning with the floor, cut it all in one piece from 1/8" balsa, 18 1/2' wide for 28 3/4' of its length (the floor fits inside the walls) then 9' wide for the other 13 1/2' (see Figure 4 and Kit Photo).

Next, cut the two ends from capped siding, each 19' wide, 13' high at eaves, and 19' at peak (Figs. 1 & 2). These fit inside the side walls. Each has a 2 1/2' x 3' opening just under the

peak and a stripwood board is cemented across each at eave height. One end has a double door opening 6' x 6 1/2' with 1/32" balsa doors cemented on the outside in an open position. The other end has a 3' x 6 1/2' door leading into the boiler room and a 4' x 6 1/2' door opening set 4' up, leading out onto the rear platform. A jog will have to be cut from the under side of the end to fit across the

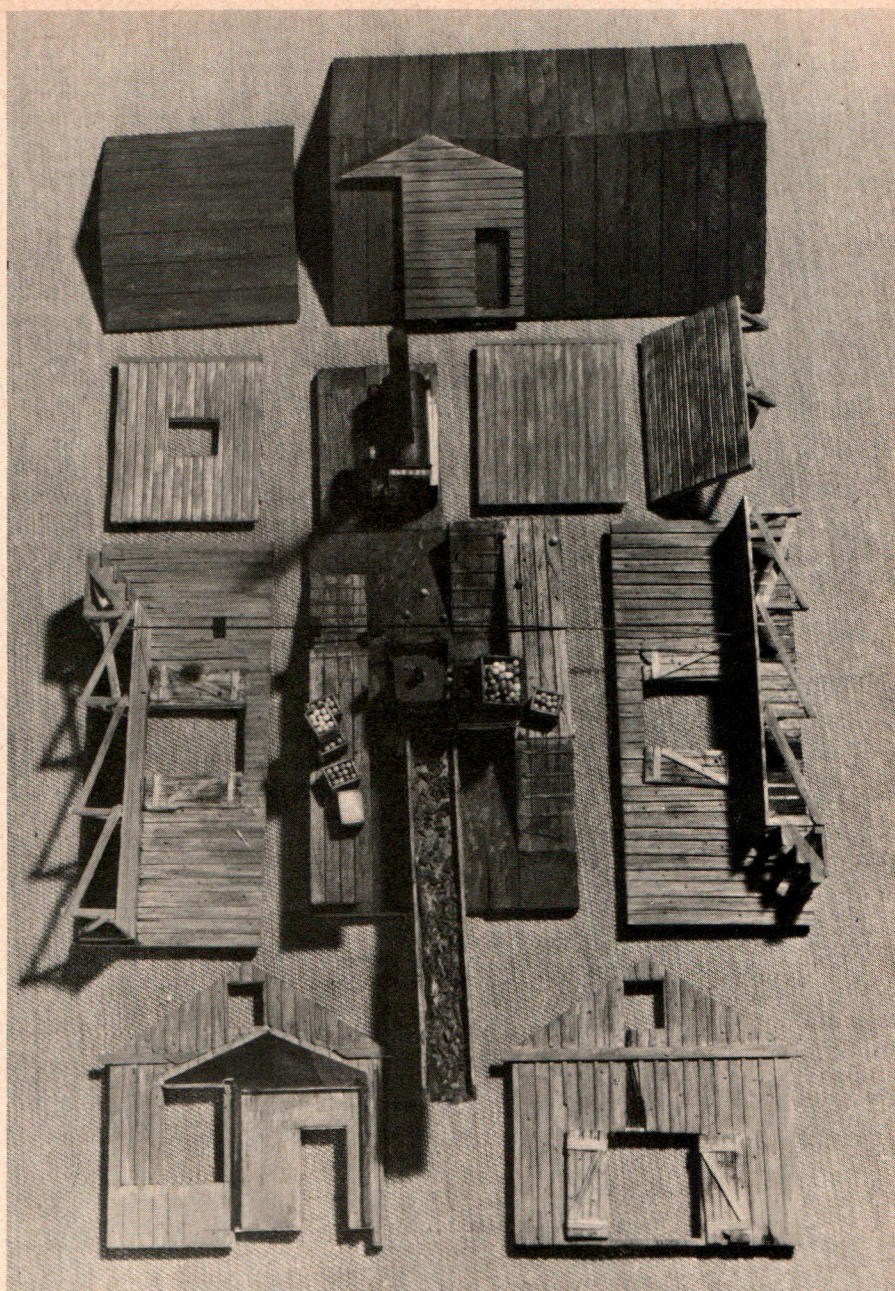
9' width of floor of the boiler room.

Cut out the two side walls, each $12\frac{3}{4}' \times 30'$; each has a door opening in the center, $5' \times 7'$ at platform height. Each opening requires two doors which are cemented in an open position. I then built two identical platforms, each $5' \times 24'$ with steps attached and cemented one to each outside wall.

Now is a good time to weather and age the walls we have ready for assembly. I keep three solutions handy. Raw sienna (oil) and a touch of brown in turpentine—a light gray—a darker gray, all washes with just enough body to deposit the required color. I use the raw sienna on all interior finishes as it gives a natural wood color. I sometimes dab it in streaks on the outside too, then follow it up with the grays. In this instance, after roughing up the capped siding a bit I achieved a silvery gray weathered look with darker shadows showing. For contrast, the inside of the doors, which of course are turned outward, are stained with raw sienna. The platform is a medley of stains.

And if you're going to detail the interior as I have, now is the time to go at it. It's neither necessary nor really desirable to go in for all the interior wall framing. I merely had time on my hands and spent it piddling. The cutaway photograph gives an idea of the general layout: platforms, each side with ramps to floor; cider press and grinder, side by side (bits of balsa cemented together and painted—your design would be equal to mine, I'm sure) in a central position under the shaft and pulleys. A conveyor, built of balsa, extends out the doorway to carry off the pomace. The boiler is a piece of dowel $2\frac{1}{2}'$ in diameter by 8' long bedded in brick. The flywheel is made of light construction paper 9" wide, cemented as it is wrapped several times around a dowel 3' in diameter. Two pieces of stripwood are mortised in the middle to make the four spokes. Pulleys on the wire shaft are merely 1' diameter doweling with holes drilled through the center and painted black. A belt from the boiler room flywheel actuates the shaft while other belts actuate the grinder and conveyor. The grinder has a hopper $2\frac{1}{2}' \times 3'$ at its top, which as you see, is filled with apples. A dowel 16' long and 15" in diameter is required for service as a smokestack.

Now to assemble sides and ends to floor, and then on to the boiler room annex. Cut two sides, each $11' \times 13'$ from clapboard siding. To one end of each cement $6" \times 6"$ stripwood corner posts. One side has a window opening $3' \times 4'$, set 4' up, in the middle. Next, cut an end as seen in Figure 1, with a door opening at one corner. From a scrap of balsa, $1/16"$ or $18"$, cut a triangle the same shape as the top of the end you have just made. Cement this to the wall of the main structure to serve as a roof support. Assemble the walls and make



"Kit photo shows all parts of the cider mill before assembly. Apples are tiny nonpareils used by cooks to decorate cake. Pomace is made of tea leaves or bits of tobacco. Model looks best when loaded with apple crates, cider barrels, action.

a platform to fit the one side, $9' \times 13\frac{1}{2}'$. Weather the annex and we'll go on to the roofs.

For the main roof I cut two pieces of $1/16"$ balsa, each $13\frac{1}{2}' \times 33'$, and wishing to give the roof some sag, after I had beveled the joining surfaces at the peak I sanded each until it was slightly concave, so that when joined it had a noticeably sway-backed look. They were joined and cemented along the peak only, then turned over and triangular braces of $1/8"$ balsa were fitted to the under side, making the roof removable. The boiler room roof has sides $9' \times 15'$, with a hole, of course, for the stack. I painted both with two shades of blending gray, then striped them to simulate roofing paper.

Now to make the apple crates. Cut some $1/8"$ balsa into strips $15"$ (scale)

wide, and these again into lengths of $1\frac{3}{4}'$. This represents the inside dimensions of the crate as to width and length. Then cut some $1/32"$ balsa into strips $18"$ wide, sand them somewhat thinner, and cut them into length of $15"$ for ends and $24"$ for sides and cement these around the blocks, making a crate about $21" \times 24" \times 18"$ deep, leave enough space at the top in which to pack a layer or two of apples in cement. In some I packed red apples, and in others, yellow. Each crate received a stain of raw sienna and the sides and ends were striped with pen and brown ink to simulate slats. They looked very realistic so I made a dozen or more while I was at it.

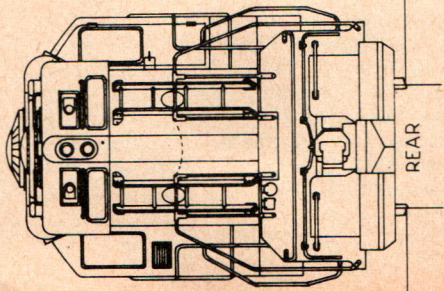
No windows need be made; when the cider season ends all such openings are merely boarded up. ■

THE SD-7 was added to the Electro-Motive catalog in 1952, being replaced by the SD-9 in 1954. The SD-7 and SD-9 both used the same basic body although there were some minor advances and changes made on the SD-9.

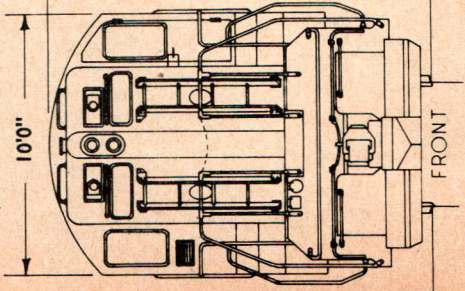
The SD-7 was equipped with a 16-567B diesel engine rated at 1500 hp., and the SD-9's were equipped with the 16-567C engine rated at 1750 hp. The SD-7 was bought by the following railroads: Southern Pacific, Union Pacific, Baltimore & Ohio, Bessemer & Lake Erie, Denver & Rio Grande Western, Great Northern, Central of Georgia, Chicago & North Western, Pennsylvania, Nevada Northern, and Milwaukee Road.

The SD-9 was purchased by the Southern Pacific, Denver & Rio Grande Western, Soo Line, Bessemer & Lake Erie, East Joliet & Eastern, Duluth Missabe & Iron Range, Great Northern, Chicago & North Western, Chicago & Illinois Midland, Pennsylvania, the Atlanta & Saint Andrews Bay Railway, Central of Georgia, and Pennsylvania.

Drawn by George Trager

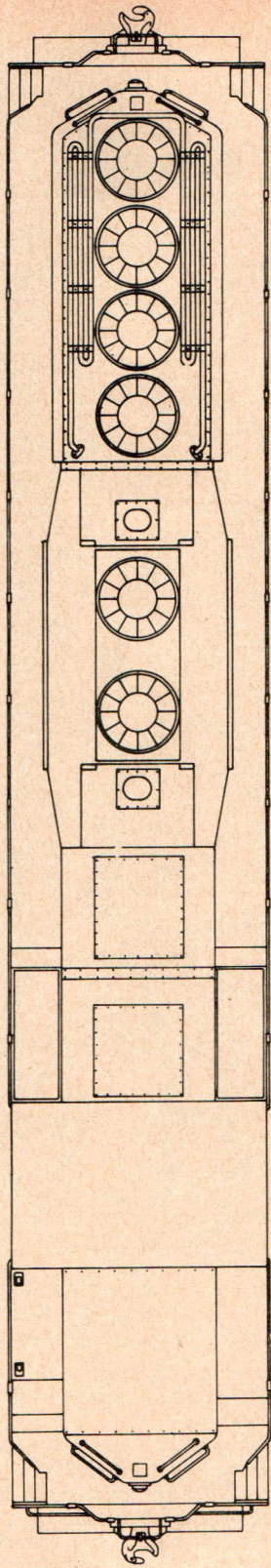


REAR

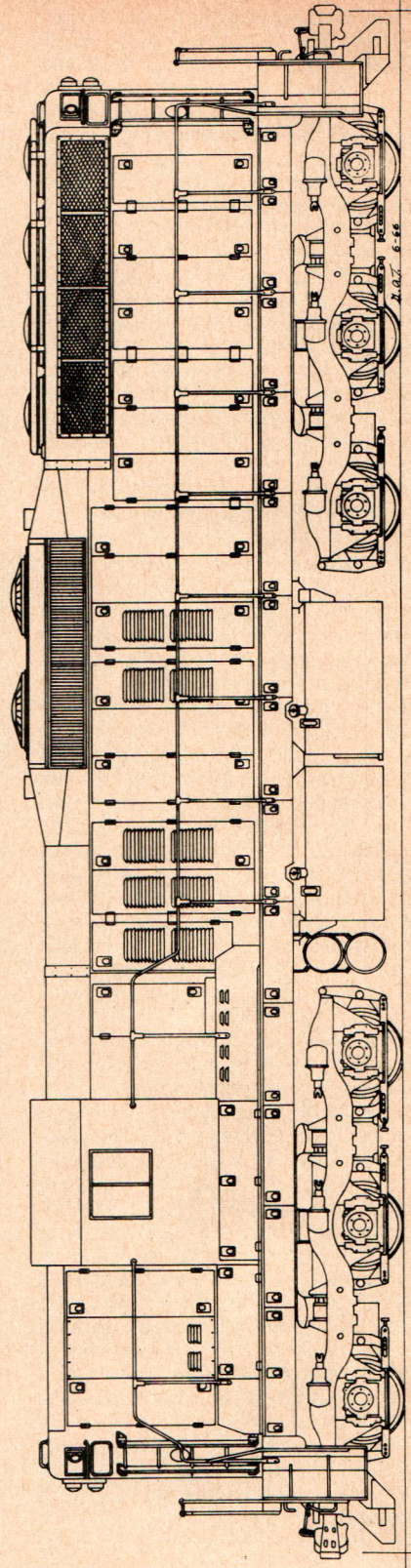


10'0"

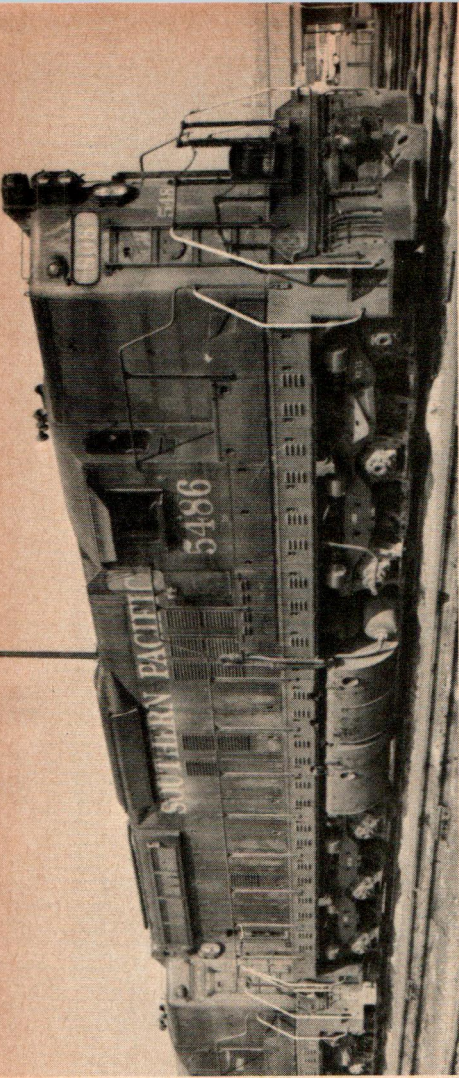
FRONT



ELECTRO-MOTIVE SD-7 1500 HP: 1952 SD-9 1750 HP: 1954



60' 8 1/2"

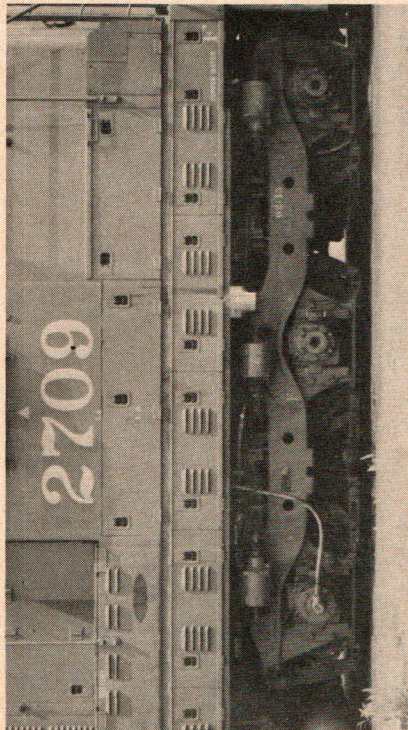


Espee 5486, type SD-9 had same basic body as SD-7 but packed 1750 hp. Many minor details were also different, as the extra tanks, headlights. Hood units were getting bigger, more versatile.

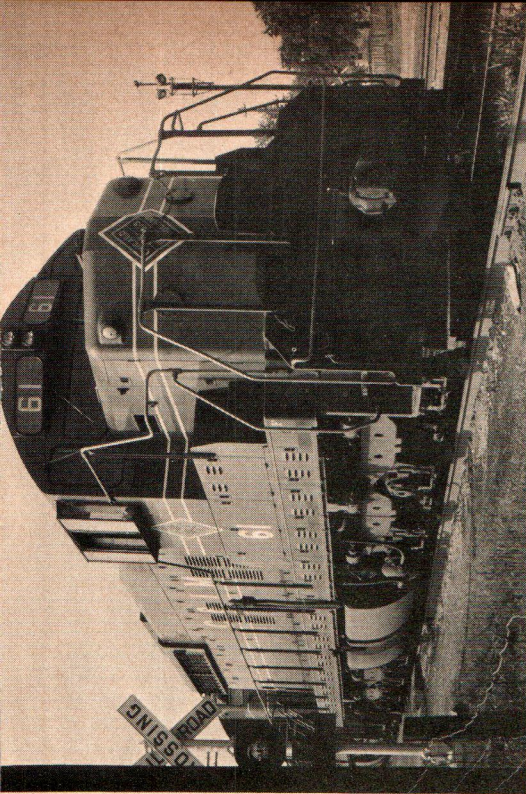
ELECTRO-MOTIVE SD-18 1800 HP: 1959

ELECTRO-MOTIVE'S SD-18 was added to the line in 1959 and was equipped with a 16-567D1 diesel engine rated at 1800 hp. The SD-18 had only limited appeal and was bought by four roads: Bessemer & Lake Erie, Duluth Missabe & Iron Range, Chesapeake & Ohio, and the Chicago & Illinois Midland.

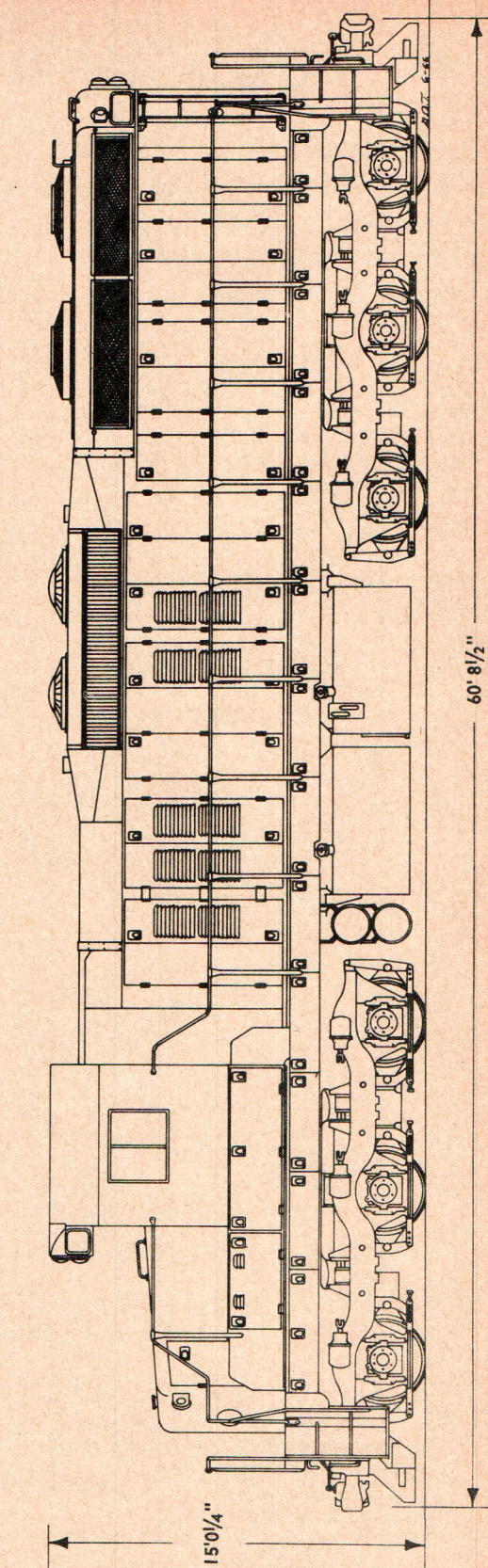
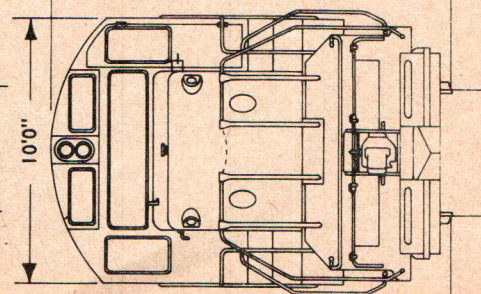
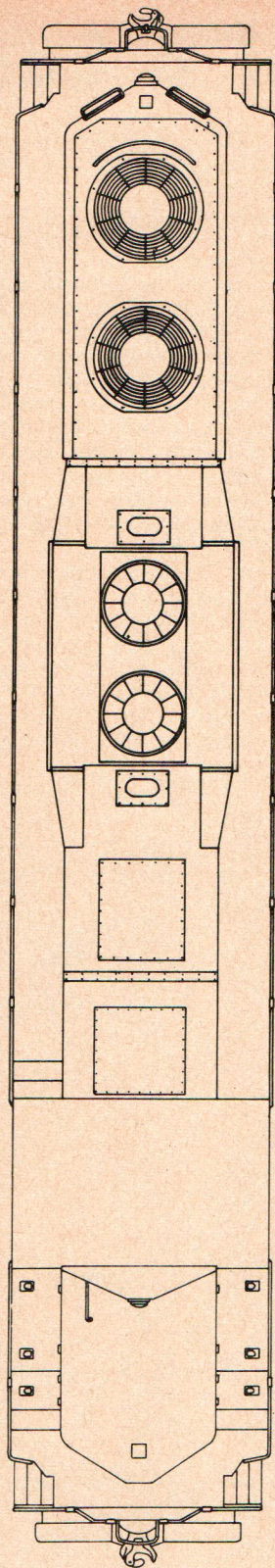
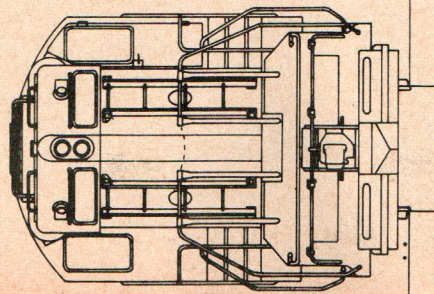
RAILROAD MODEL CRAFTSMAN



Six wheel trucks as used on the SD-7, SD-9, and SD-18.



Chicago & Illinois Midland is one of only four roads which went for cut nosed SD-18 1800 hp. unit. Road received two in 1963.



A Loop is not a Loop by the layout doctor

Reverse loops can be made integral parts of terminals providing better operating possibilities and disguising the prime function of the loop.

REALLY, a reverse loop need not be just a reverse loop, as the above title suggests. To most model railroaders the word loop usually means a simple oval, permitting trains to continue running indefinitely over a relatively small section of track in which the two ends have joined. The idea is not new, but it is clever and has entertained kiddies since before the turn of the century. Of itself, it does not stimulate the minds of us model railroaders, though some other hobbies thrive on the loop idea. The loop in model railroad-

ing becomes a bore except to those modelers whose prime interest is the equipment.

The use of a loop as a means of reversing at the end of a section of track, shaped in the manner of a balloon, would be termed a reverse loop. Very common at one time trolley and interurban lines, they permitted cars to turn without the need for changing poles and switching. Such reverse loops are rare in real railroading although I remember the old Cold Spring Harbor loop on the Pennsylvania - Reading Seashore Lines. There is also one built into the bowels of New York's Grand Central Terminal.

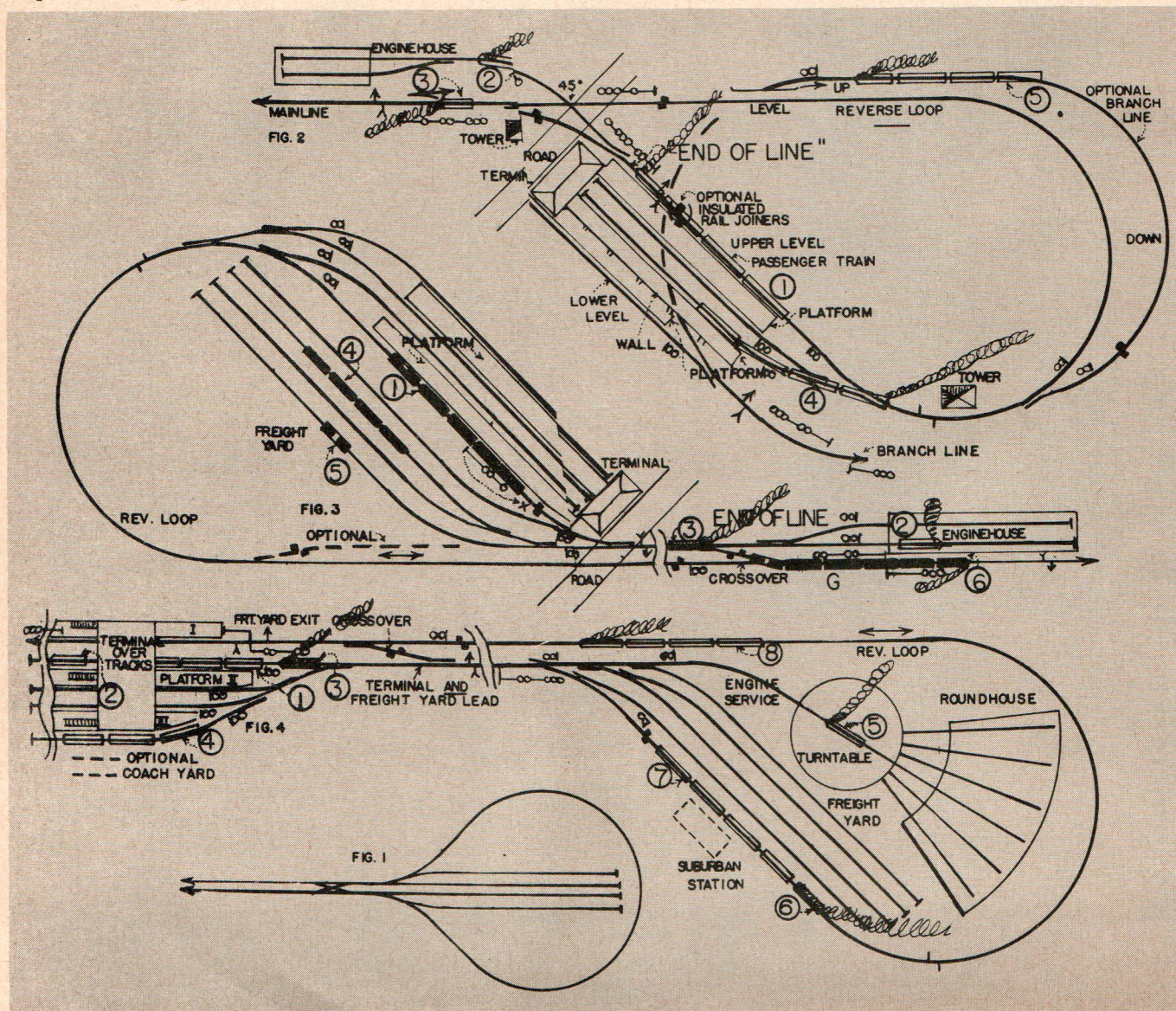
Reverse loops abound on model railroads, since model rails are interested in returning trains to their starting points. The operator cannot be in two locations at one time, but by having a loop at the other end of the line, he can send trains out and have them come back home, permit-

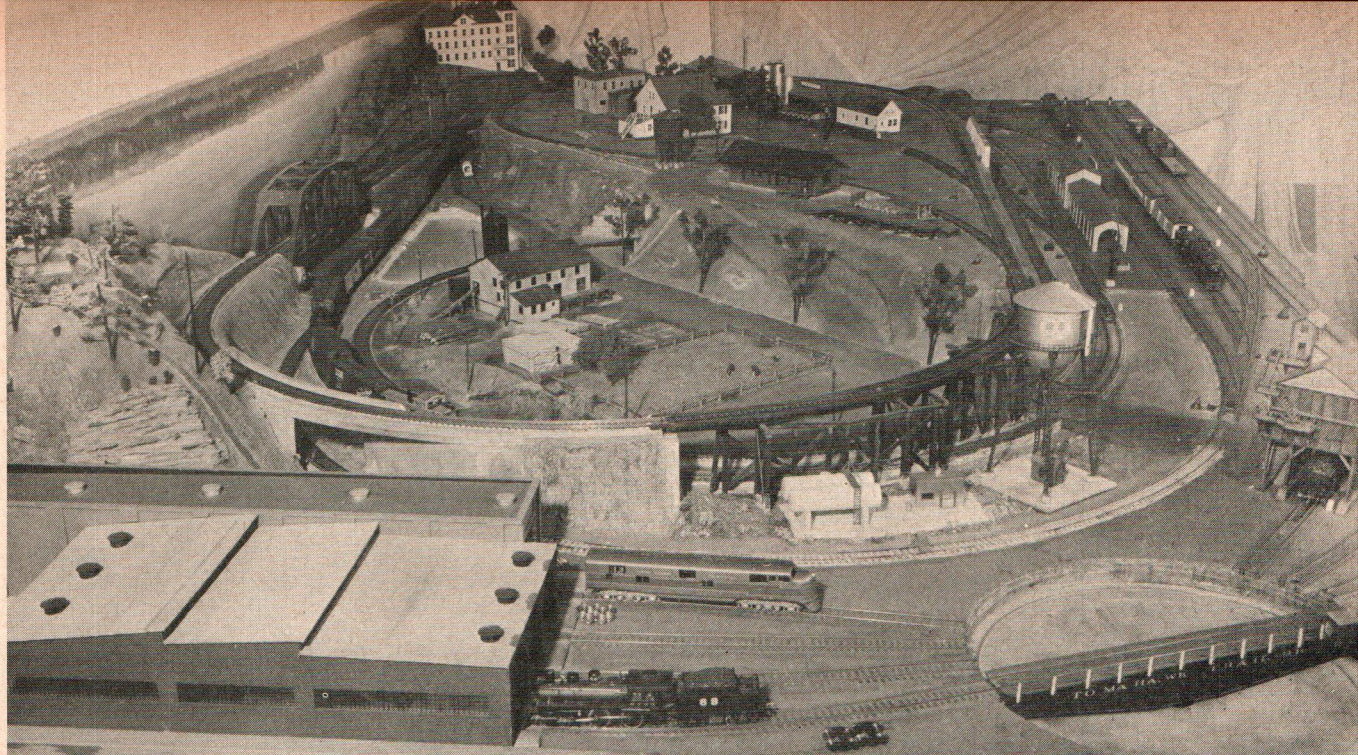
ting the operator to concentrate on the one big terminal which is about as most modelers have room for.

I've been drawing layouts for years with reverse loops and my usual treatment of them is to make them double track, providing a sort of passing and storage track, where trains could be held as operating contingencies demanded. Alternately, a terminal might be located inside a reverse loop, as shown in Fig. 1. The loop might run beyond the end of the terminal stub tracks, or above or below them. The open space could also be filled in with a town, coach or freight yards, or other trackage or sidings.

Suppose, however, that we make the reverse loop as an optional dead end terminal for trains, yet have it available for use as a reverse loop whenever we want or need it, in one man operation or for those occasions when terminal work isn't desired.

Fig. 2 shows the scheme in fairly





Upper level reverse loop on Lloyd Church's Tomahawk Trail Railroad would lend itself to any of the suggested Layout Doctor terminal

treatments shown on the opposite page. Modelers often hide reverse loops under a tunnel. Church's loop is inconspicuous, well done.

simplified form. Trains approaching the reverse loop from the left keep going straight and enter the stub end terminal, as if to continue on out again. Let the train stop at (1), leaving the cars at the platform. The engine can then go directly to the enginehouse as (2), or head out on the main line (3) and then back around the reverse loop to the rear of its former train. It can then head out the way it came, or pull the cars up clear of the terminal ladder track and back the cars and itself into one of the terminal tracks. Alternately, this work could be done by a switch engine.

I show a branch line ducking downhill and under the terminal to continue on around the layout if you wish. This has a spur running into a low level platform of the terminal for an RDC or other short passenger train. You can also use the branch line to form a big oval around the train room, tying in its indefinite end to the main line at left. Through trains from the branch would then proceed through the terminal track and directly out on the main line to the left.

You may not want to put in signals right away, but I show one suggested way of doing same. Where there is only one lamp it is red and always lit (at "end of line" because it is the end, and other places because of an interlocking where a "stop and stay stopped" aspect is needed). Two lamps would be orange over red, while three lamps would be green over orange over red. The highest aspect, where there are two heads of two or more lights is for the main route, while the lower aspect would be for the secondary route. Dwarf signals are all two colors, orange and red. Even if you don't wire up signals,

you might like to put them in place and illuminate them with colored reflectors or jewels.

Now in fig. 3, I've introduced some variations and complications. The engine house has been kept on the same side of the main line as the reverse loop and terminal, which will enable you to shove the whole main line closer to the wall and save width. The passage, for complete reverse looping of trains without stopping, is via a left-hand crossover to the main line.

I've omitted the branch line, as on fig. 2, though it could be worked in. But I've used part of the inside of the reverse loop to put in a small freight yard. Entering freight trains round the reverse loop, pass through the terminal track, and pull up toward the enginehouse and back in to the freight yard. A more interesting operation is shown by the numbers. Let the road engine drop its train at (1), and pull up to the enginehouse (2). Let a switcher (3) come from the enginehouse or yard and couple to the train sitting at (1). It can then put the train (4) into one of the yard tracks after shoving the caboose (5) to a separate track. Of course cars in the yard can later be shunted around. The same switcher can later make up a train on any of the yard tracks or on the terminal track, the road engine (2) comes from the roundhouse, and leaves town via the crossover per (6).

In fig. 4 the idea is carried a little further. Instead of the enginehouse being at the end of the line, I have located the passenger terminal there, parallel to the entering main line (which may also have a stop there). The freight yard is still in the center of the reverse loop, and so is the enginehouse. I show a roundhouse here, with turntable. The turntable

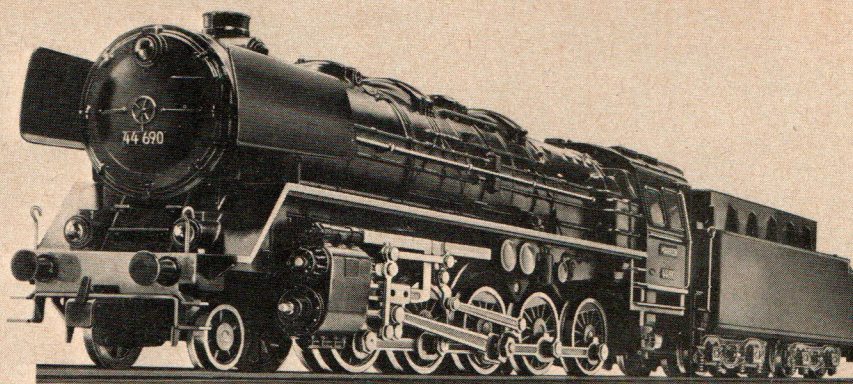
seems redundant since there is already the reverse loop to turn engines. However, I wanted to be able to comment that when you plan to store a lot of engines—and most model rails end up with an awful lot—a turntable is economical in that it saves switches. You could alternately have a parallel track engine house, as the other sketches.

A passenger train entering the terminal after rounding the reverse loop would stop at (1). It's engine would be uncoupled and pull up to position (2) and held there by a short section of track insulated from the rest and energized only by a pushbutton. A switcher would then come from elsewhere (3), couple to the rear end of the cars, pull them out and shove them into another of the terminal tracks (4). This enables the road engine (2) to escape and proceed to the turntable and roundhouse (5) for servicing.

Another method would be for the road engine to drop its train at some suburban station (Englewood, 125th St., Jenkintown, Winton Place, etc.), head for the enginehouse, and let a switcher (6) shove the train (7) into the terminal track. A passenger train departing from the terminal would run straight out and around the reverse loop, (8). Freight operation would be as in fig. 3.

Insulated rail joiner locations suggested are solid black blocks on each side of the track. Most feeders to the electrical sections thus created are arrow heads and tails. However the feeders to reversing sections have neither heads nor tails.

No doubt as time proceeds, you'll see this idea incorporated into more and more of my layout plans. Try it on your plan and on your actual layout. Let's hear what you think of it.

**DEUTSCHEN BUNDESBahn**

German Federal Railways class 44. Engine and tender permanently coupled. Pressure zinc castings finished in black. 3 illuminated headlamps. Walschaert valve gear. Telex couplers. 8-wheel tender. Overall

length 11 in. Two special adhesion tires. Smoke unit uses 0241 refill cartridge. Divided frame permits engine to negotiate sharp sectional track curves. 2-rail DC, NEM standards. Mfd. in Germany by

HO

Gebr. Marklin GMBH, Goeppingen, Germany, from Marklin parts. Interchange couplers supplied. For Marklin 3-rail operation, see LBP 241. New 1966.

HAMO

RMC LOCO BUILDERS PHOTOS

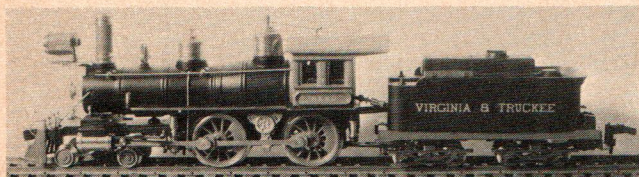
Each month RAILROAD MODEL CRAFTSMAN will print one or more Builders Photos of commercially produced model railroad locomotives, eventually covering all of the popular model scales. We will try to include as many of the new releases as possible as well as older kits and models which have been substantially modified through the years or which have been discontinued.

Ultimately the modeler will find that he has a complete file of Builders Photos of locomotives he himself owns, which he may care to tack up in his train room. The file will also create a valuable fact and reference data catalog of scale model locomotives which have been pro-



duced through the years, giving information as to construction, price, availability, etc., which may help the modeler in identification, parts procurement, and in bartering

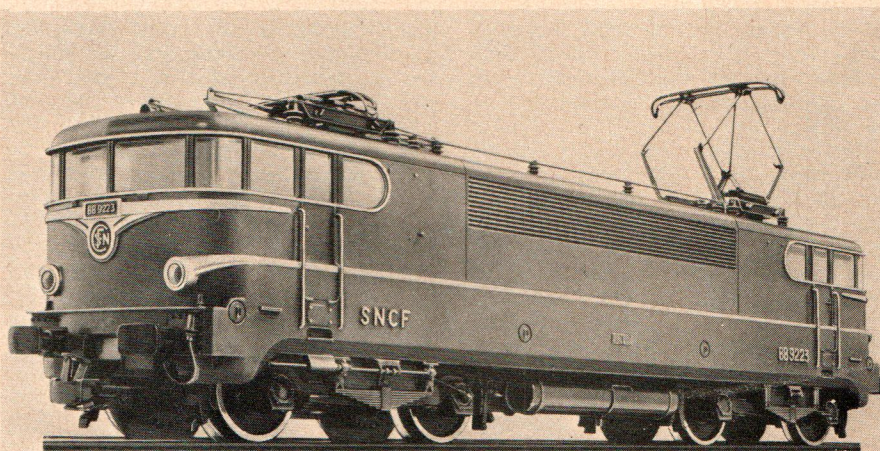
Locomotive Builders Photographs were common in the days of steam, with all of the locomotive manufacturers producing photographic cards of their latest products giving all technical information. RAILROAD MODEL CRAFTSMAN is indebted to the manufacturers for their cooperation in providing photos, technical information, and in some cases actual production and other confidential information for this purpose.

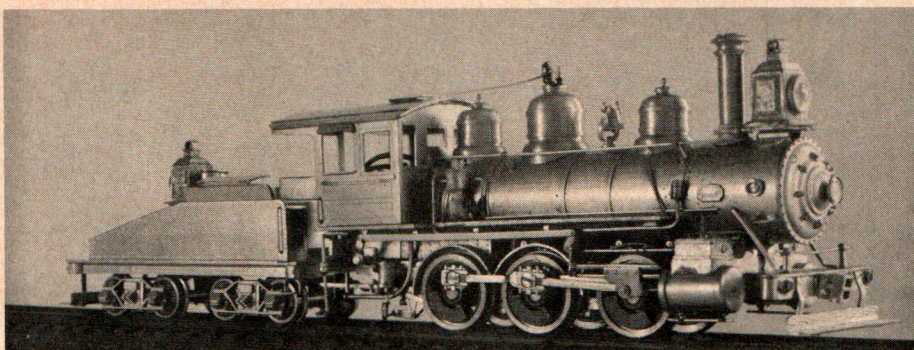


**SOCIETE NATIONALE DES
CHEMINS DE FER FRANCAIS
CLASS BB-9200**

HO HAMO

French State Railways (SNCF) class BB-9200 electric locomotive. Pressure die cast zinc casting. Inset plastic windows. Twin headlights light in direction of travel. Fixed buffer beams. Head code changes with running direction. Special adhesion tires for increased traction. 7 in. long over buffers. 2-rail DC, NEM standards. Mfd. by Gebr. Marklin, Goeppingen, Germany. See LBP 227 for Marklin 3-rail version, catalog 3038. Catalog 8338 new 1966.

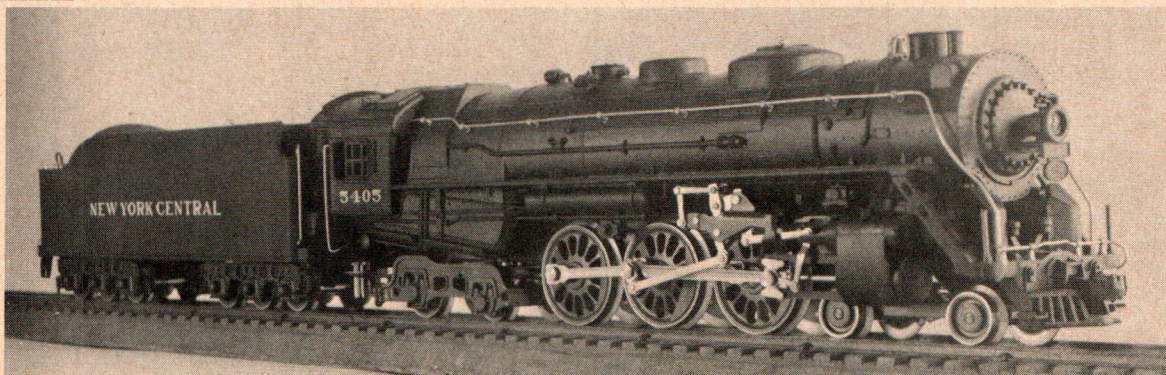



COLORADO MIDLAND SWITCHER - 1887
HO
MODEL ENGINEERING WORKS

Prototype, Colorado Midland 0-6-0 Switcher built in 1887 by Schenectady, Nos. 30-32, later Nos. 100-102. All brass model except side rods and drivers. Japanese permag motor, worm and gear drive. Min. radius,

to 10". Weight 11 oz. Length 7 1/4". Two illuminated headlamps. Arch bar tender trucks. Horn coupled with draft gear supplied but not mounted. Decals included for C.M. New 1966. Catalog No. 402, rtr un-

painted, \$49.95, July 1966. Imported from Japan by Model Engineering Works, Box 261, Monrovia, Calif.


NEW YORK CENTRAL J-3A HUDSON
HO
RIVAROSSA - AHM

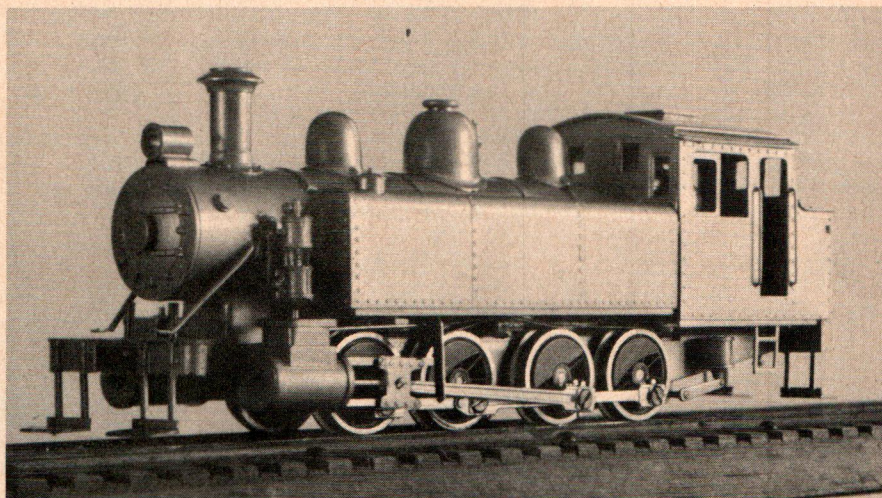
Prototype, New York Central J-3a Hudson with 30,000 gallon tender. Ready to run with plastic boiler and tender, truck frames. Stamped and formed metal frame. Nickel silver Baker valve gear. Rivarossi motor

delivers power through horizontal drive shaft, worm and gear. Operating headlight. Overall length 13 1/4". Weight 14 oz. Metal fittings. 79" Box Pok drivers. NEM flanges. Mfd. in Italy by Rivarossi, imported in

U.S.A. by Associated Hobby Mfrs., Inc., 3214 N. Boudinot St., Philadelphia 34, Pa. New 1966, list price catalog 5096, rtr painted, \$29.95. Lettering is style of early 1930 period.

LOGGING 0-8-0 TANK SWITCHER
HO NORTH WEST SHORT LINE

Baldwin type 0-8-0 logging switcher. All brass Japanese model with turned, stamped, and cast fittings. Nickel side rods and drivers. Vertical mount Japanese motor delivers power through worm and gear to No. 4 axle. Slide valve gear. Coal pile. Accepts universal draft gear boxes front and rear. Length 4 3/4". Weight 8 oz. Imported by North West Short Lines, Box 423, Seattle, Washington 98111. Price rtr unpainted July 1966, \$16.95.



Commercial Turnouts and Switch Point Control

by Whitney K. Towers

Commercial turnouts offer the easiest means of getting the model railroad operating smoothly in the least amount of time. A wide variety of good products combine into a myriad of combinations to suit every need of the modeler.

THERE may be considerable inner satisfaction to be had from making turnouts and using individual ties in building the model railroad. Those who follow this practice claim it to be the only way and exhibit a certain amount of smug satisfaction in their accomplishments. I don't want to knock this method, since I follow it myself. Therefore we practitioners of the art of individual ties and rails should take note before we adjust our halos too snugly on our pointed heads, that not everyone is willing to spend the extra time and effort involved. And even among those who would like to, there are many who just do not have the time because of business and family and other commitments. Thus commercially made turnouts are a very important must for many modelers in their enjoyment of model railroading.

Before we rush into an examination of the turnouts which are available in hobby shops, let's define what it is we're talking about. As a member of the NMRA Glossary Committee, I'm a little sensitive about terminology and the use of words. As a carry-over from our toy train days, we often refer to the trackage which allows a single line to branch out into two or more lines as a switch, when actually the term switch refers only to the movable point rails. Then entire assemblage of track including the frog, running rails, switch points,

guard rails, and wing rails, is properly called a turnout.

NMRA's definitions for these terms clearly indicate the difference between a switch and turnout. A *turnout* is the separation of one set of rails into two or more tracks. A *switch* is an electrical control device for opening and closing circuits, or the movable portion of a turnout; the movable rails and points.

For any who may still be inclined to resist this differentiation, perhaps the slightly longer definitions approved by the American Railway Engineers Association will be decisive: *turnout*: "a track arrangement consisting of a switch and frog with connecting and operating parts, and extending from a point of the switch to the heel of the frog, by means of which engines and cars may pass from one track to another, usually designated by the number of the frog; i. e.: No. 8 Turnout."

AREA gives the following definition for *switch*: "a pair of movable track rails, with their fastenings and operating rods, providing the means for making a path over which to move an engine, car, or train from one track to another. A device for opening and closing an electric circuit."

Fig. 1 shows the basic components of a turnout, to help further the understanding of the discussion which follows.

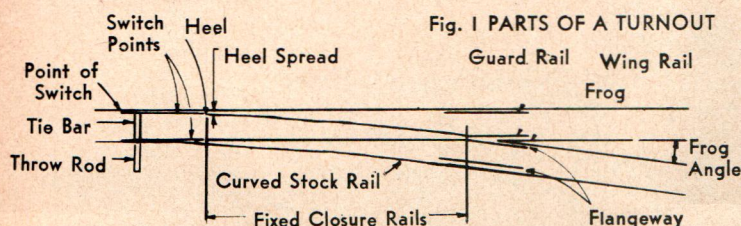


Fig. 2: Tru-Scale Ready Track switch machine with integrally mounted switch machine on milled wood ballast block. Closed frog is unusual feature of line, offered in brass, nickel silver.

While all turnouts included in our discussion are available in the Los Angeles area and are generally available elsewhere, they may not be available in your favorite hobbyshop at any one time. If I've overlooked your favorite, its only because it wasn't available for analysis at the time this article was prepared. Neither have I taken into account some lesser known brands and custom producers whose product may be exactly what you want. I've tried to keep the discussion of each make as factual as possible and if I've allowed an opinion to creep in, its my own.

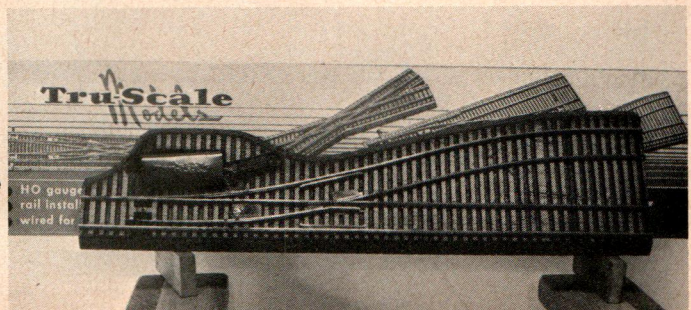
The prototype's use of turnouts includes No.'s 16, 18, and 20 for high speed service; 10 and 12 for slow speed main line service, and No. 8's for yards and sidings to meet general conditions. In model railroading we tend to think of turnouts not only by their frog number, but also by the radius of curvature of their closed curvature rail.

The following table compares the frog number with its approximate radius and is based on information supplied by the U S Steel Corp:

Frog No.	Radius at Track Centerline	Approx HO Radius
5	178'	24½"
6	259'	35-¾"
7	366'	50½"
8	487'	67"
9	615'	85"
10	779'	107"
12	1105'	159"
20	3289'	453"

While I've heard a few dreamers and theory men talking in terms of using No. 20 turnouts on their layouts, I'm dubious of their ability to swing a 37 foot trammel bar to correctly determine the curved closure rail and to my knowledge No. 20 turnouts are not commercially available, except to the prototype.

On the prototype you seldom see a turnout smaller than a No. 5 although 4's are common in model railroad use. I realize that each of us wants to have as much trackage as possible and the tendency is to utilize No. 4's since they occupy less space, but for practical considerations particularly in cross-overs, No. 6 turnouts will provide much better operation causing fewer derailments and look much better in use, especially with the longer cars common today. Cross-overs utilizing No. 8 or No. 10 turnouts will perform even better.



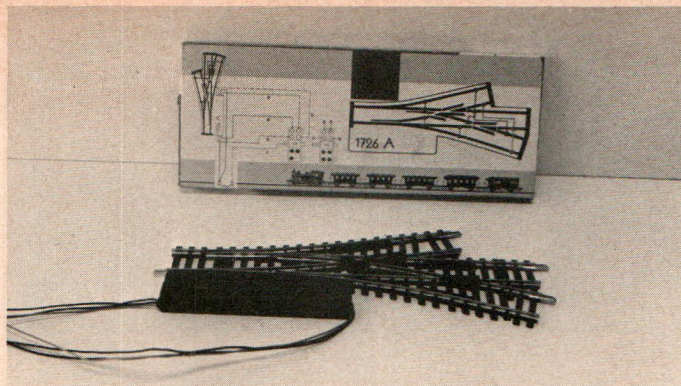


Fig. 4: Fleischmann 3-way switch with wiring diagram. Turnout has switch machine mounted integrally, removable if desired.

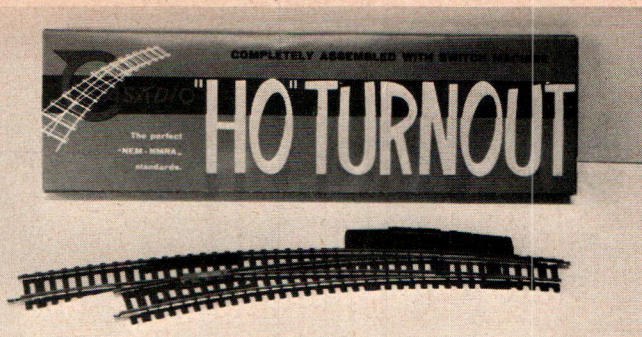


Fig. 5: Curved Casadio turnout is unusual, also has miniature built-in switch motor, removable by razor sawing plastic housing off of ties. Casadio turnouts take European equipment smoothly.

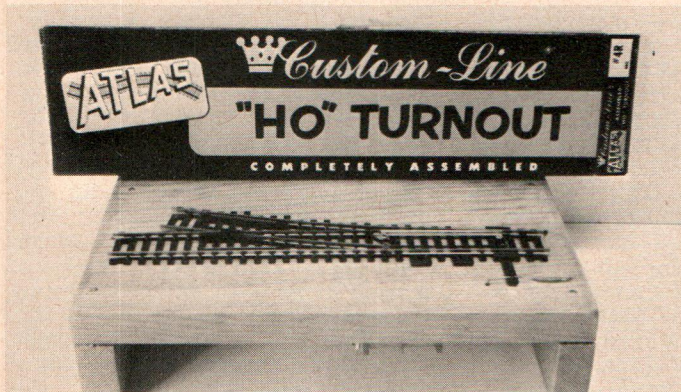


Fig. 3: (above) Atlas Custom Line Turnout with bell crank control is shown in Fig. 9 (right) connected to an under table Ken Kidder switch machine. Servicing is from under the table.



Obviously the selection of a particular brand of turnout is a matter of personal preference, with looks, available sizes, ease of mounting, and accuracy of gauging for your equipment all playing important roles in an individual's choice of turnouts for his rail empire.

While all the turnouts covered in this discussion can be operated with surface mounted switch machines, only four come so equipped. Fleischmann, Tru-Scale, and Casadio turnouts can be purchased with switch point motors attached ready for installation while a switch machine for Atlas Custom Line, available separately, snaps in place.

TRU-SCALE, fig. 2, Ready Track is available in several sizes with a TRU-SCALE switch machine mounted on the turnout tie block with the familiar milled ties. This turnout differs from all others in that both the points and the frog wing rails pivot to make a closed frog turnout, the only commercial one on the market at this writing. Among its advantages is the closed frog which prevents wheel flanges from picking the frog point which could cause derailments. In prototype practice, closed frog switches are usually used on high speed mainlines. This turnout is made primarily for use with regular plain or milled (with ties) TRU-SCALE wood roadbed, or other roadbeds of rubber or cork. For use with molded plastic tie trackage systems, a small shim would be needed to equalize

rail heights. The same variety of turnout types and frog numbers are also available without the factory installed switch machines for installation and operation using any type of table top or beneath the table switch motor.

ATLAS CUSTOM LINE, fig. 3, a rigid frog turnout, as are all the others, is available in a variety of sizes with its own switch machine (purchased separately) for manual or remote electric operation which can readily be snapped in place for table top mounting. As with prototype turnouts, the ATLAS CUSTOM LINE turnout which has been adapted for beneath the table switch machine mounting and will be discussed in more detail later.

The FLEISCHMANN turnout, fig. 4, shows a three way turnout with an integrally mounted switch machine which can be remotely controlled or hand thrown. While designed for use with FLEISCHMANN's proprietary line of trackage, it is compatible with most American track systems though it might require shimming to adjust to correct rail height depending on which brands of track you use and the type of roadbed you prefer.

CASADIO turnouts, fig. 5, also have an integrally mounted switch machine with the hand operated feature allowing either remote electrical con-

trol or hand throwing at the turnout. The feature which allows both hand and electrical control is often overlooked and has the advantage in local switching moves of providing manual means of throwing turnouts by the switchman as the yard goat goes about its shunting duties.

These four manufacturers provide the bulk of turnouts utilizing surface mounted switch machines though all are readily adaptable for under the table switch machine mounting: Atlas, Casadio, Fleischmann and Tru-Scale. No attempt was made to check these various brands for compliance with NMRA standards. The Italian Casadio track makes a clever compromise between NEM and NMRA standards. Because of the compromise, the Casadio track accepts equipment such as Rivarossi with ease but may cause trouble with some of the new fine scale flanges such as the experimental Central Valley CV-4 wheel which has a very small flange head and a much narrower than NMRA standard wheel width. And of course, all brands of track are governed by the same laws regarding the running of long wheelbase locos and cars through sharp radius switches. Modelers who contemplate the operation of equipment using equipment whose tolerances are over or under NMRA standard might want to check further which brands are most suitable before installing them on your layout.

Manufacturers of both switch ma-

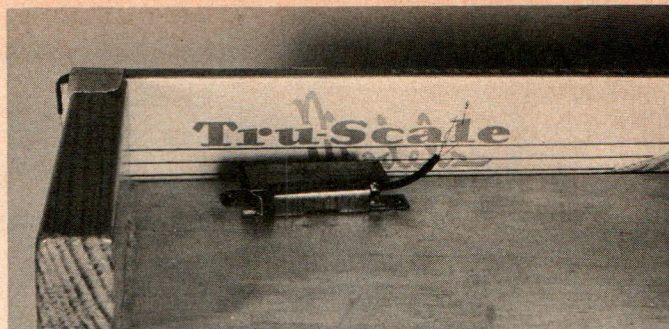
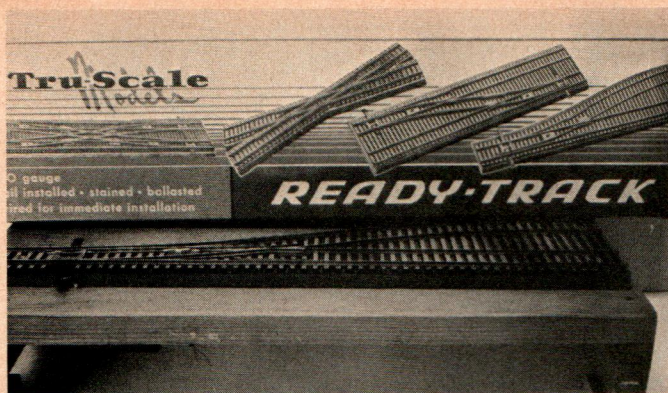


Fig. 6 (left) shows Tru-Scale turnout with bell crank tied to throw bar for under table mounting, shown in Fig. 7 (above), using same type Tru-Scale switch motor as shown in Fig. 2.

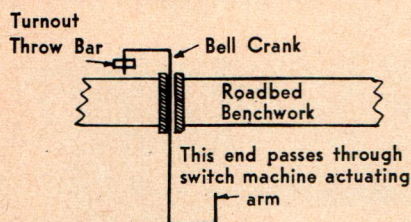


Fig. 8 UNDERTABLE MOUNTING FOR TRU-SCALE SWITCH MACHINE

chines and turnouts offer suggested methods for beneath the table mounting of switch machines which is the preferred means of turnout control for most model railroaders. It's true that through the years surface mounted switch machines have decreased in size, one manufacturer has attempted to disguise the machine as a stack of ties and they can also be hidden beneath small sheds, loading platforms or trackside ballast bins. However, on a large layout it becomes rather difficult to find logical means of disguising the surface mounted switch machine whose size vastly exceeds anything normally encountered that close to the rail on the prototype.

In illustrating the methods of under the table mounting of switch machines I've purposely avoided duplicating the way suggested by each manufacturer for mounting his machine. Not because I don't think his way is good, or perhaps even the best method, but in order to provide variations of mounting methods which

can be used at times when it is not convenient to use the suggested method. The methods shown do not exhaust the variety available, but will stimulate your thinking and allow you to determine which is most suitable for your particular application.

Fig. 6 shows a regular Tru-Scale turnout without the surface mounted switch machine. Normally the Tru-Scale machine is used only as a surface mounted machine but as shown in Fig. 7, by bending a suitable bell crank of piano wire (.025" to .050" dia.) it can be used for under the table mounting. The drawing, Fig. 8, shows the principle involved. The activating arm of the Tru-Scale switch machine describes an arc and the trick of the bell crank as the switch machine activating arm.

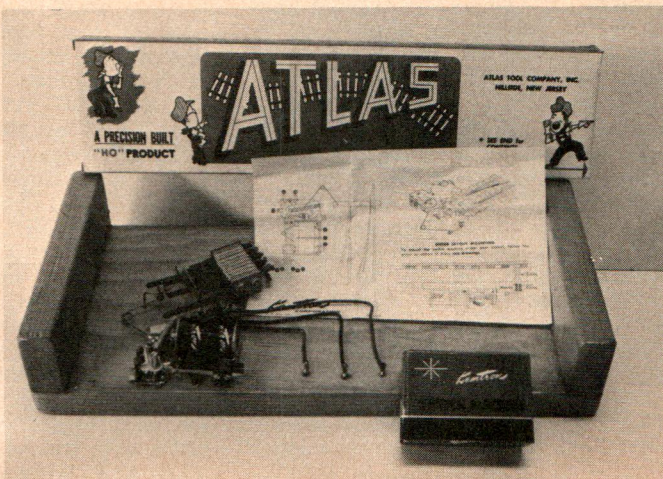
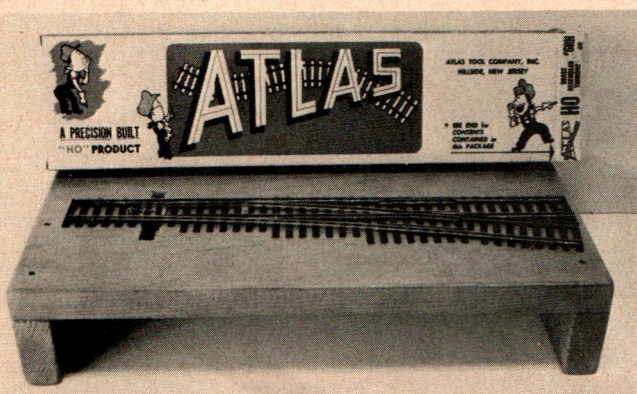
Piano wire which is very stiff and springy makes ideal bell cranks for transmitting switch machine motion through the table top to either the point throw bar or tie rod. Along with the piano wire you'll want a suitable small diameter tube whose inside diameter is sufficiently larger than the wire to provide an easy moving bearing surface for the piano wire bell crank. By drilling a slightly undersize hole through the table top and the force fit will hold it in place. For example all the bell cranks illustrated which use piano wire were made with .032" dia. wire and 1/8" O.D. brass tube with an .045" I.D. The hole drilled in the table top was #31, .120", providing a press fit for the

tube bearing. There is nothing sacred about either the wire size or the tube diameter, anything available from your hobby dealer will do the trick, though remember the heavier the wire the harder it will be to make small right angle bends and the stiffer it will be requiring a closer match between bell crank throw length and switch machine throw travel. With a lighter springy wire the bell crank throw can be greater than the switch machine travel with the excess being overcome by the springiness of the wire. This will insure good contact and positive throw of the points against the stock rail.

Going back to figure 3 you'll find the bell crank is mounted through the horizontal hole provided on the ATLAS CUSTOM-LINE throw bar, then down through the sleeve bearing with a bell crank arrangement through the throwing arm of a KEN KIDDER switch machine. The natural springiness of the piano wire allows it to be used as a ball crank without incorporating the long armed torsion spring provided with KEN KIDDER machines, fig. 9.

Figure 10 shows an ATLAS turnout hooked up with a piano wire bell crank mounted between the rails and connected to the switch point tie bar in the center, while fig. 11 shows the underside. Here we've used a KEMTON switch machine with the linkage hook up similar to that suggested by KEMTRON in their instruction sheet with one addition. The loop

Fig. 10 (below) shows standard Atlas turnout with between the rails bell crank connected to (Fig. 11) Kemtron switch machine and additional relay contacts for special circuits operation.



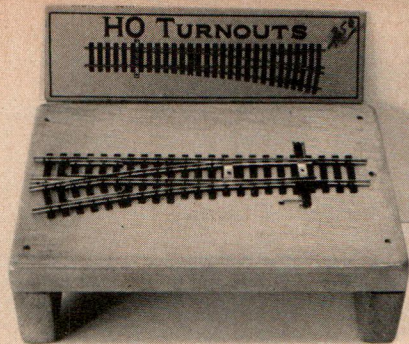
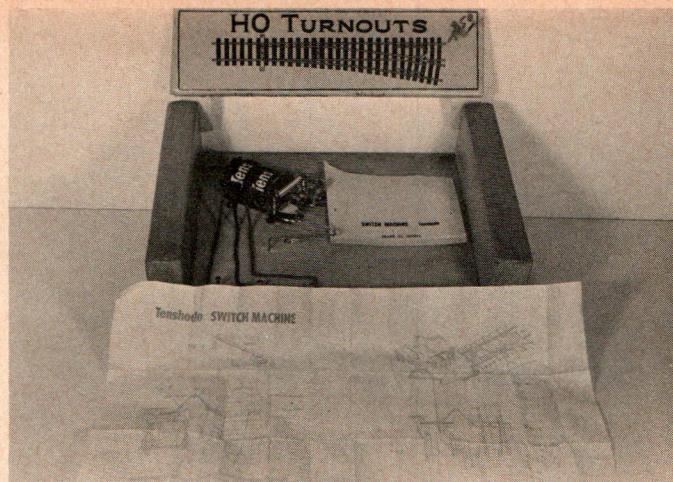


Fig. 12: Yokohama Shinohara turnout with horizontal bell crank attachment to throw bar (above) is connected in Fig. 13 (right) to Tenshodo-PFM switch machine. Minor soldering is needed.



on the bottom piano wire bell crank has been wound around itself and the end allowed to project out of the way from the switch machine mounting position in order to activate a separate set of contacts; in this case a triple pole double throw. Not that the KEMTRON machine requires extra contacts, it provides more than any other machine used in these tests, but it does illustrate the principle that relay contact sets obtainable from radio supply houses or surplus stores can be readily adapted to almost any switch machine to provide additional electrical switching circuits.

Fig. 12 shows a YOKOHAMA SHINOHARA turnout activated by a bell crank connected horizontally to the double ended throw bar. It was the only all rail fixed frog turnout I found available which was mounted on ties.

Fig. 13 shows the mounting of the TENSHODO switch machine used to

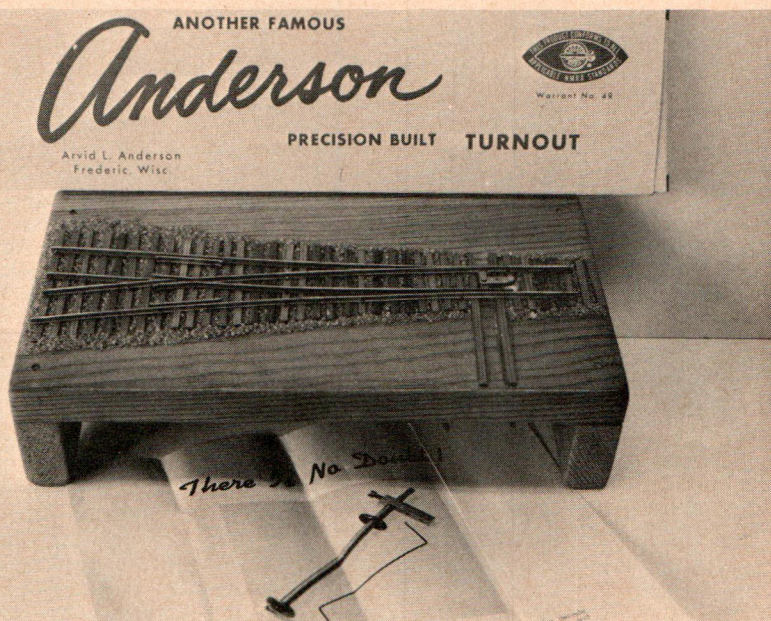


Fig. 15: Anderson turnout mounted on Campbell low profile wood ties (above) is connected to (Fig. 14 right) Hammant & Morgan underfloor switch machine using Anderson turnout link.

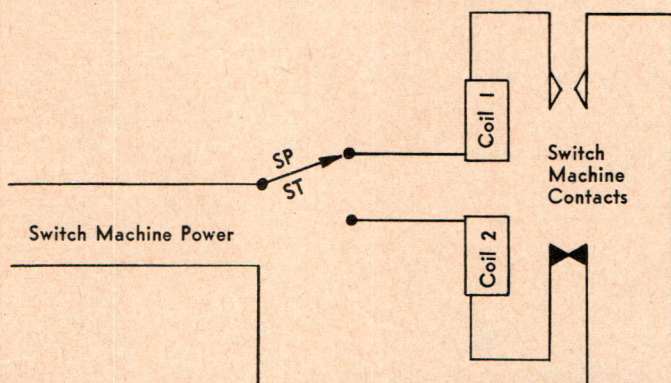


Fig. 16 AUTOMATIC COIL CUTOFF FOR TWIN COIL SWITCH MACHINES USING ONE MAKE AND ONE BREAK CONTACT

operate the bell crank. This machine resembles the KEMTRON machine in outward appearance but is equipped with extra switch contacts. Both provide separate contacts for routing the track power around the switch points to the frog. The TENSHODO has two single pole normally closed

circuits either of which is opened depending upon which direction the machine is thrown. The KEMTRON machine has one additional contact on each of these separate circuits providing both normally open or normally closed contacts for activating signal lamps, etc.

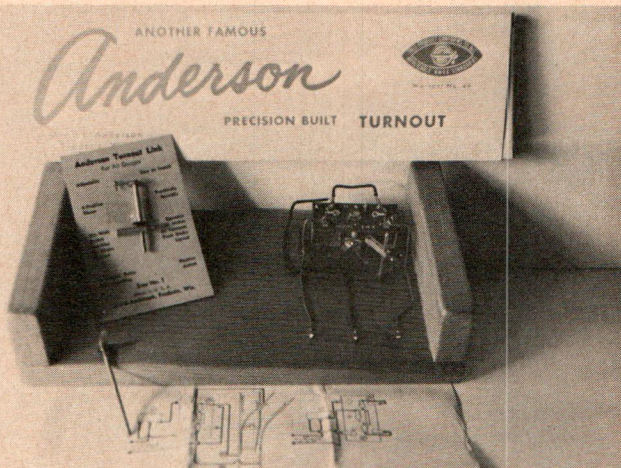
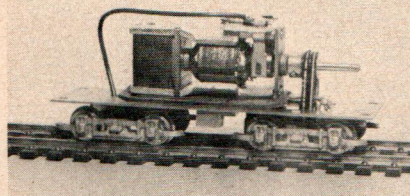


Figure 14 shows an ANDERSON turnout, which has been awarded NMRA Warrant #49. It is an all rail turnout designed for installation on either individual wooden ties or fiber tie strip material. The one illustrated was mounted on CAMPBELL's Low Profile Ties. The ANDERSON turnout comes with brass straps soldered across the nickel silver rail heads to hold the components in proper position. After it has been installed the

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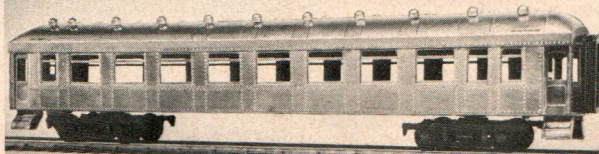
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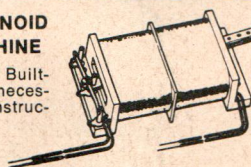


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straps are removed by unsoldering and the railhead cleaned. It is also an all rail fixed frog turnout.

If you're not already familiar with the two varieties of fixed frog turnouts currently available perhaps I'd better explain that ATLAS, CASA-DIO and FLEISCHMANN are fixed frog turnouts which utilize an insulated frog eliminating the necessity for gapping the turnout after installation. This saves work in wiring and gapping but has the disadvantage that short wheelbased locomotives, particularly 0-4-0 tank engines, can stall on the insulated frog when moving slowly. Actually this design theory depends upon momentum of the powered unit to carry it over the insulated frog, which works out satisfactorily under normal running conditions.

The other variety of fixed frog turnout is the all rail frog such as ANDERSON, SHINOHARA and of course all 'home made' turnouts. These along with the previously mentioned TRU-SCALE movable frog turnout require gapping and for most satisfactory operation the points should be wired around. To wire around the points the frog should be wired through a separate switching circuit activated by the switch machine and connected to the point engaged rail. This eliminates the necessity of the track switch point carrying the current and provides separate propulsion power routing. A speck of dirt between the running rail and the switch point may hold them apart enough to prevent electrical contact being made while at the same time not being far enough apart to cause a derailment as wheels pass over it.

Now before you take umbrage with this statement and grab your trusty Remington to write a scathing rebuke, allow me to further state this is a matter of opinion, though from my own contacts in the hobby I'd say better than 75% of all modelers I know feel that wiring around the switch points should be mandatory and is certainly worth the little extra effort involved. If you've never wired around the points of your turnouts and have been operating for 20 years

or more with nary a failure, FINE! I don't want to argue with you, or even belabor the point, but you're the first I've ever heard of with such phenomenal luck.

Back to that ANDERSON turnout we left so unceremoniously. Fig. 15 shows the underside with a HAM-MANT & MORGAN (H&M) switch solenoid. These are imported from England and are a very high quality switch motor with extra contacts available for signalling purposes. With the ANDERSON turnout I used one of the recently available ANDERSON Turnout Link kits to make the bell crank. Available in three different sizes for varying thickness of table tops, they eliminate the necessity of bending up your own bell crank from piano wire and have the further advantage of being fully adjustable, making the under the table mounting of switch machines a cinch.

All of the switch machines used in this article are the twin coil type requiring a momentary switch to operate them; a single pole single throw for each coil. The switch must be momentary because the coil when energized pulls the soft iron slug bar over immediately and if the current is left on the fine coil winding more than a few seconds you'll see wisps of smoke and the insulation will soon burn off the wire and the coil will be ruined beyond repair.

While there are a variety of momentary switches available for operating twin coil switch machines none of the switch machine manufacturers or importers make any mention of the fact that the auxiliary contacts which they provide can be used to provide automatic coil cut-off. By using automatic coil cut-off wiring through switch machine contacts you can use an ordinary SPST toggle switch to operate your switch machine and the toggle handle will indicate the direction the turnout is thrown. Fig. 16 shows the wiring schematic to accomplish this trick.

A further word of caution in using bell cranks to activate switch points. Make sure that at some point in the linkage there is some form of insulation to isolate the switch machine power from coming in contact with the switch point throw bar and thus in contact with the propulsion power. If the switch point throw bar and tie bar are plastic then no further insulation is necessary, but if it is metal such as used by the ANDERSON turnout then slip a piece of insulating sleeving over some portion of the bell crank hook-up to eliminate the electrical path between switch machine and rail.

As you can see the variations possible in combining turnouts and switch machines to control the points are almost limitless, so select your favorites and combine them into a smooth operating mechanism which meets your requirements and you'll be off and running with an operational model railroad.

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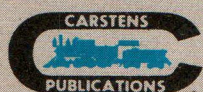
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WANT: A source of 2' ga. HO or O scale trucks or wheels. Roy Keeley, Jr., Rt. 1, Box 427-A, Theodore, Ala. 36582.

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HAVE: HO loco or car kits, US or British Colony stamps, or US coins. Want: Steam or electric loco bldrs. plates. R. J. Askevold, 1800 Edgecliff Dr., Fullerton, Calif. 92631.

HAVE: Athearn diesel units (6 pwrd., 3 dummy); Lindberg switcher; Akane 14-wh. NYC tender. WANT: Northwest Short Line 2-8-2T (Harmond Lumber) or PFM, B&O, E-27ca - 2-8-0. SAE for list. Eugene Canfield, 1631 Turnbull Canyon Rd., Hacienda Heights, Calif. 91745.

HAVE: IMP 2-6-6-2 & 4-8-4 "Niagara locos, other HO. SAE for list. WANT: Max Gray D&RGW K-28 2-8-2 On3 loco, any cond. Jerry Miller, 404 S. Vail Ave., Montebello, Calif. 90640.

HAVE: Back issues MR, RMC, MT, 1945-1965. Many out-of-print copies. SAE. WANT: British or German military medals & war souvenirs. Steve Nichols, 6662 Steiner Dr., Sacramento, Calif. 95823.

WANT: Ken Kidder CNS&M Electroliner & Boston type 5 trolley, "O" ga. W. Allen Prescott, B508139, FICPAC, FPO Santa Francisco, Calif. 96610.

HAVE: United K-27, also C&S 2-6-0. WANT: United 3-tr. Shay w/narrow ga. trucks, Akane 2-4-4-2, or what have you? Bill Stefanech, 59 Benton Way, San Luis Obispo, Calif. 93401.

HAVE: MEW Mack Rail Bus, exc. cond. Also various HO on3 items. WANT: Walther's Shuttlejack &/or Doodlebug. R. T. Carr, 259 Water St., SP2 Santa Cruz, Calif. 95060.

HAVE: S.P. RR hand lamp (working cond.); Varney plastic F-3 AB. WANT: Lionel HO 2-4-2, or other steam w/lead tr.; 4-wh. gas elect. Garth Groff, Box 225, Represa, Calif.

WANT: Frame for Tenshodo die-cast 0-6-0T; used LS&MS 4-6-0. State price & cond. John M. Stokes, 2016 "O" St., N.W., Washington, D. C. 20036.

HAVE: United Pennsy 2-8-2, untpd.; Santa Fe 4-8-4; Gem L&N 2-8-4 Berk.; LMB C&O 2-8-4; any Max Gray. Phone 302-798-5205. C. H. Burgmuller, 122 S. Shelley Dr., Claymont, Del. 19703.

HAVE: Heath, Eico Test Equip-scope, Sig. Gens; 4 B. RCVR; Diet. Mach., Tape, others. WANT: HO (only) Shay, Heiser; Climax or brass tank eng.; caboose, any style or cond. Write first. Saul Bell, 460 N.E. 112th St., Miami, Fla.

WANT: Coach-Pullman Type Ceiling Light Fixtures, and Wall Bracket Pair, Oil, Elec., etc., not necessarily matched; also cuspidor, any RR. Advise cond, price, descr. "Pard" Lively, 2224 N. 12th Ave., Pensacola, Fla. 32503.

HAVE: Narow ga. Shays, Mack Railbus, Brill Railbus, Marklin Crocodile & Balboa S. P. water car kit. WANT: Interurbans, Denis Holman, 99 Copeland Rd., N. E. Apt. B-44, Atlanta, Ga. 30305.

WANT: Lionel 2-rail OO ga track & other OO ga track & equip. Give price & compl. descr. in first letter. All inq. ans. Tal K. Orr, P. O. Box 66, Dublin, Ga. 31021.

HAVE: OOO/n gravel car, 4 wh. coal & cattle car, 8 wh. tank car. WANT: HO Tyco Trolley pwrd. (Nob Hill). Douglas Kaniuk, 2946 N. Hamlin Ave., Chicago, Ill. 60618.

HAVE: Lionel 275w trans.; Varney GN str. pass.; Milw. Rd. & B&O Pennline str. coaches w/lites; pr. mar S sws.; pr. OO trucks; AF Hudson loco & Athearn Pac. kit. WANT: Hudson loco, Akane, United or Tenshodo. Geo. Williams, 7722 S. Sangamon St., Chicago, Ill. 60621.

WANT: Kusan pwrd. diesels & rolling stock O ga.; #773 Steam loco (1964); #746 N&W steam loco; #2367 Wabash; O scale steam loco 3-rail, Glenn Johnson, 866 N. Monroe St., Decatur, Ill. 62522.

HAVE: HO eng., kits, Marker lanterns, Switch Stand lanterns, old Craftsman & other RR books. WANT: Traction multi-units under-floor motors w/36" 1/4 scale 3/32" tread & 3/64" flange depth wh. only. T. Dunn, 8317 W. 119th St., Palos Park, Ill. 60464.

WANT: Pix, TT, tickets, etc. from Chicago, Aurora & Elgin RR. Also HO equip. modeled after CA&E. State cond. & price. Dennis Rambo, 216 W. Illinois St., Wheaton, Ill. 60187.

WANT: Lionel #3494-150 op. Mo. Pac. Box Car, #3494-625 op. "Soo Line" Box Car, #116 City Sta., #438 Sig Tower #927 Flag Plot. State cond. & price. Jim Tandy, Box 35, Carrollton, Ky. 41008.

WANT: HO 1900 period frt. cars, kit or assembl. State price & cond. Richard Boutall, 1521 Lakeshore Dr. Metairie, La.

HAVE: United NKP 2-8-4; Max Gray WM 3-T Shay; Tenshodo CNW 4-4-2; Balboa Breckenridge. WANT: LMB T&P 2-10-4; Akane 2-10-2; Gem T&P D-8 4-6-0; United DRGW HO on3 2-8-2. Jim Ford, 8317 Parola St., New Orleans, La. 70118.

HAVE: PFM engines. WANT: PFM NYC Niagara, P&LE 2-8-4 & Tenshodo Crane. All letters ans. E. L. Roberts, 1610 Dogwoodhill Rd., Baltimore, Md. 21204.

WANT: O ga: Kasiner; cars, kits, corr. skirt strips, end sill castings. Exacta: cars, kits; Lobaugh pass. trucks. F. T. Martin, 9106 McDonald Dr., Bethesda 14, Md.

WANT: The Trolley Coach: A Directory. Also 2x2 slides of Trackless Trolleys. John F. Keavy, Jr., 504-A Peckham St., Fall River, Mass. 02721.

HAVE: Lionel #249E w/whistle tender, good cond., gunmetal, chrome piping. WANT: Lionel or AF pre-war II loco of comparable value. Len Duckworth, 528 W. Woodland Ave., Ferndale Mich. 48220.

HAVE: Cast iron pull top trains. WANT: Lionel Blue Comet set; Lionel #437 Sig. Tower. Art Million, 1205 Oakes St., Grand Haven, Mich. 49417. SAE.

HAVE: O & S. SAE for list. WANT: Lionel std. ga. #9E, 424, 425, 426 pass. cars, green or orange; other std. & wide ga. W. C. Wallish, 1220 Taylor St., Grand Haven, Mich. 49417.

WANT: Amer. Flyer O ga. pass. cars. A. F. Zephyr. Hiawatha, City of Denver. Daniel Kerelko, Floodwood, Minn.

WANT: 1933-36 RMC back issues. Also std. ga. HAVE: AF S ga to swap. Alden Miller, 3212 34th Ave. So., Minneapolis, Minn. 55406

HAVE: Blue Comet 422 obs. car/no roof. "O" A.F. 1101, Champion Set, Lionel 248's & 259. WANT: Blue Comet 421 or std. ga. Jim Craigmile, 15 E. 113th Terrace, Kansas City, Mo. 64114.

WANT: 250EW Hiawatha & pass. car set 782-783-784. Boxcar 6464-200, both exc. to new cond. James M. Greytak, 1401 Ave. B, N. W., Great Falls, Mont. 59401.

HAVE: AHM 2-8-4 Berkshire, Super-detailed mint cond. Varney Dockside & Mantua Shifter w/valve gear, exc. cond. Athearn GP-9 gear dr. chassis, old mtr. WANT: Varney 4-6-0, 2-8-0 Old Lady, AHM GE U-25c PRR. A. Jacobsen, 2616 4th Ave. No., Great Falls, Mont. 59401.

WANT: Milwaukee Rd. or Rock Island streamlined HO pass. cars. Chris Klieger, 306 13th St. N. W., Great Falls, Mont.

HAVE: Complete movie camera & projector outfit, exc. cond. WANT: What have you in HO ga? All replies ans. Box 542, Hamilton, Mont. 59840.

WANT: Exchange of info. on numbers & types of 3 wheel plastic & metal Marx post war cars. Howard Moulton, 204 Richards Ave., Portsmouth, N. H. 03801.

HAVE: Modern Lionel O ga. equip. SAE for list. WANT: Lionel, Ives, A. F. std. ga. locos & cars. Leon Eggers, 76 Forest Rd., Allendale N. J. 07401.

WANT: Used HO Shay, Climax (2 or 3 track) Heislser, Sierra RR 2-6-6-2, Wabash 2-6-0 Ma&Pa 2-8-0, SAE w/info. on cond. & price. F. Cooke, P. O. Box 212, Brielle, N. J.

HAVE: Zeiss Contina 35mm camera w/2.8 lens. WANT: GN steam, brass junkers, cars; PFM PRR K-4. Peter Klapper, 16-26 Alden Terrace, Fairlawn, N. J. 07410.

HAVE: Lionel 027, O tinplate, structures, track, acc. WANT: HO. My list for yours. Kevin Brady, 16 Blue Ridge Ave., Green Brook, N. J. 08818.

HAVE: Amer. Beauty 85' streamlined pass. car kits lettered CNW. WANT: PFM Omaha or U.P. switcher, U.P. Consolidation, Climax. Heislser or other small brass steam frt. loco. Fred Huhndorf, 132 Hidden Trail, No. Plainfield, N. J. 07060.

WANT: RMC back issues & bound volumes, also Morristown & Erie Railroadiana. List cond. & price, first letter. Steven Ahlstedt, 313 Elizabeth Ave., Ramsey, N. J. 07446.

WANT: Lionel solid T-rail track & solid T-rail R.C. sws. oper cond. Also Lionel Maroon Pullmans 2625, 2627, 2628. Bob Bacon, 26 Tuxedo Dr., Wayne, N. J. Tel 201-279-1117.

HAVE: Model Craftsman 1935-1952; Model Builder 1940-41; Story of the Royal Scot 1933; Rwy. Wonders of the World 1935, others. SAE. Ed Moran, 3300 Netherland Ave., Bronx, N. Y.

HAVE: Suidam factory kit, Silvine Power Console exc. cond.; MR, RMC, '60-64; Engine, Misc. WANT: New leather basketball. Tony Engberg, 242 Henry St., Brooklyn, N. Y. 11201.

HAVE: Many items to trade. Want: 700E tender, any cond.; Buddy L. equip., any cond. L. Bernstein, c/o Imperial Window Shades, 1783 New York Ave., Huntingdon Station, N. Y. 11746.

WANT: Used PFM Santa Fe locos. Diesels any rd. Bill Halsey, 89-25 Parsons Blvd., Jamaica, Queens, N. Y. 11432.

HAVE: Lionel O ga. Including #681 steam loco #2343 Santa Fe w/B unit, many op. & non-op. cars & acc. SAE for list. WANT: Cultivator or small tractor. M. J. Forneris, 14 Country Club Dr., White Plains, N. Y.

WANT: Louis Marx Mickey Mouse trains, Unique circus cars, Lionel Mickey Mouse Circus train, other toy circus trains. H. R. Ashley, 12 Lindsey St., Yonkers, N. Y. 10704.

HAVE: Tenshodo Sig. U.P. 4-6-6-4 Challenger, most recent prod. in mint cond. WANT: Crown-United N&W Y6b 2-8-8-2 w/aux. water tender, mint cond. Jess Barbour, 325 Seneca Pl., Charlotte, N. C. 28210.

WANT: Dummy units of Baldwin Sharknose, Alco FA-2, Alco PA-2, Tenshodo SD-9, Gerald Hodapp, 920 Tiffin Ave., Hamilton, Ohio 45015.

HAVE: #6, 42, 29 coaches, etc; some O & S also. WANT: Better std. items like Blue Comet, etc., any shape. Send list. Verne Lowry, 1471 Cherrywood Rd., Kent, Ohio 44240.

WANT: Tenshodo SD-9 & PSM Fairbanks Morse Baby Trainmaster. Cond. must be perfect. State price first letter. Thomas Dressler, 2708 Ritchie St., Portsmouth, Ohio 45662.

WANT: Plastic Display kits of steam locos O or HO, non-pwrd. Bob Inghram, Rt. 3, Box 307-Y, South Point, Ohio 45680.

HAVE: Marx 027 ATSF A&B 4 car frt set, Pulmor mtr., exc. cond. WANT: Mantua A-A Sharknose - Hobbytown Dr. Must be in at least fair shape. SAE. J. E. Simpkins, 90 Bon Air Ave., Tiffin, Ohio 44883.

HAVE: A&B Sharknoses; AHM Tyco, Athearn, Diesels, frt., pass. cars; Mag., XZF cplrs. WANT: HOH3, Tyco F-9s, GP-20s, UP, also Century 430, Kadec cplrs, modern frt. cars. SAE. Jim Meehan, 5943 "E" St., Springfield, Ore. 97477.

HAVE: 15 1/2" Brass steam loco Bell, Air or Ropepull. WANT: Std. (4'8 1/2") Ga. 3-wh. Velocipede, or 4-wh. 2-man pumper handcar. Must be complete & operable. Bruce Saylor, 2836 Leon Ave., Audubon, Pa.

HAVE: Hobbytown Alco RS shells only w/frames, metal & plastic inserts - 3pc. units, all small parts if wanted. WANT: Mars Lites in mint cond. by Scalite. T. M. Holcome 4th, 46 Laurel Lane, Levittown, Pa. 19054.

HAVE: Atlas & Tru-Scale #6 turnouts w/motors. Atlas brass flex track, Athearn GP 30 kits, Athearn streamlined pass. cars, NMRA cplrs. Good to exc. cond. WANT: HO. H. F. Roney, Jr., 3404 McIntyre Dr., Murrysville, Pa.

HAVE: HO PFM Crown DMIR 2-8-8-4. Crown C&NW 4-8-4. WANT: Std. ga. #381E, #9E. Rock Acito, 5746 Grays Ave., Philadelphia, Pa. 19143.

HAVE: Lionel Hopper Car #2956 or Caboose #2957 die cast. WANT: Max Gray "O" ga. N5 caboose, N8 caboose. Pnt. job or lettering immaterial. Bill Wolfer, 704 Pecan Dr., Philadelphia, Pa. 19115.

HAVE: Smooth side GN pass. cars (all 8 diff. PFM, RMC June cover) CNJ steam negs. WANT: Steam or diesels; frt. cars; AHM pass. cars; Mantua brass locos: HO/HOH3/O. A. Kovacs, 510 S. Franklin, Wilkes-Barre, Pa. 18702.

WANT: Bowser 4-6-6-4, Quote m.p.d.; or blt. in good running cond. Quote max. p.e. reasonable price. J. L. Reese, Jr., 6023 Mxie St., Houston, Texas 77007.

HAVE: Ma&Pa (Olympia) 4-6-0, 15" & 18" radius snap track, other items. WANT: motor car, espec. Kidder McKee Motor Car. George Knight, 1200 S. Court House Rd., Arlington, Va. 22204.

HAVE: Lionel Congressional Set (2360-2530-2541-2542-2543-2544). WANT: Lionel std. ga. Stanley Stahl, 102 Bennington Court, Charlottesville, Va.

WANT: 2 0-6-0 Timber Switchers, formerly sold by Trakside Specialties. Will pay cash. Send cond. 1st letter. A. Byer, 1022 Montrose Dr., So. Charleston, West Va. 26303.

HAVE: 16 copies Model Airplane News 1961-1963; 43 copies American Modeler 1960-1964. WANT: 2 Athearn AT&SF geared GP-9s, or what have you? Gerald Koscinski, 2514 Sunset Dr. Beloit, Wis. 53511.

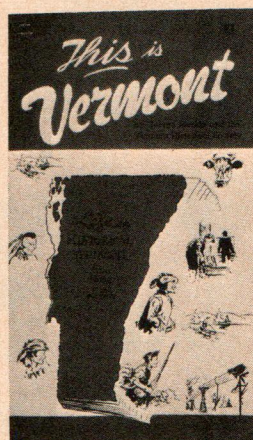
HAVE: Kasiner, O ga., 24-Duplex-Roomette, 80' Main Line. O ga. Rwy. Exp. Agency Reefer. WANT: Kasiner, O ga. bagg., diner, or coach: Main Line. O ga. Milw. Rd. Exp. Reefer. T. P. Blazek, 8101 W. Herbert Ave., Milwaukee, Wis. 53218.

WANT: Baldwin diesel switcher (HO) by Kemtron. State cond. W. Cooksley, 57 Linstedt St., Sault Ste. Marie, Ont., Canada.

HAVE: Lionel 2046, 6816 others; also 027 pass. cars 2442 ser. WANT: GG1, 625 or 6, 7, 8 diesels 6572, 6536, 6556, 3428, 3434 frt. Willis L. Frew, Box 233, Pense, Sask., Canada.

HAVE: Several yrs. RMC MR, MT: Brass locos. WANT: Hobbytown diesels; PSM HO FM diesels; CP and CN coaches by Grant; CPR 4-6-2 PFM SW-7 switcher, CPR 2-8-0. Harry Schimm, 1841 Glenwood Dr., Kamloops, B.C., Canada.

EXCHANGE PLACE and other RMC department closing dates have been advanced a few days from the 8th. to the 5th of the month, two months preceding date of issue. Thus the last day we can receive RMC Timetable notices or Commercial Classified ads for the November issue would be Sept. 5th. Exchange Place ads are placed in the next available issue depending on space availability. The earlier dates are needed due to an earlier on press schedule now used by Railroad Model Craftsman to allow for longer delivery time.



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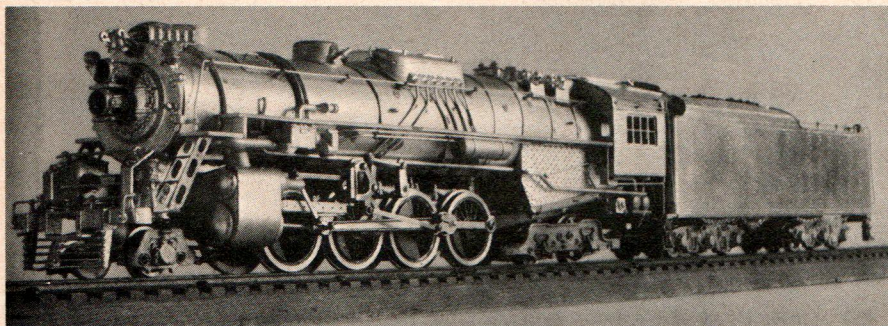
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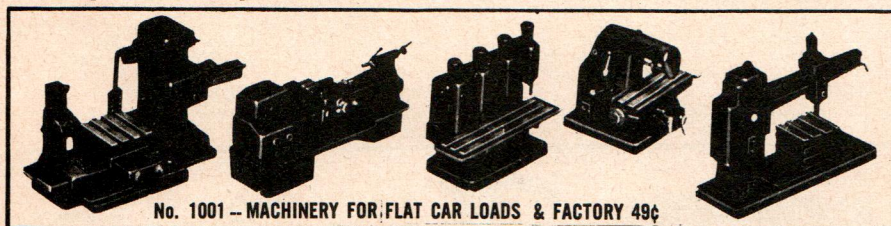
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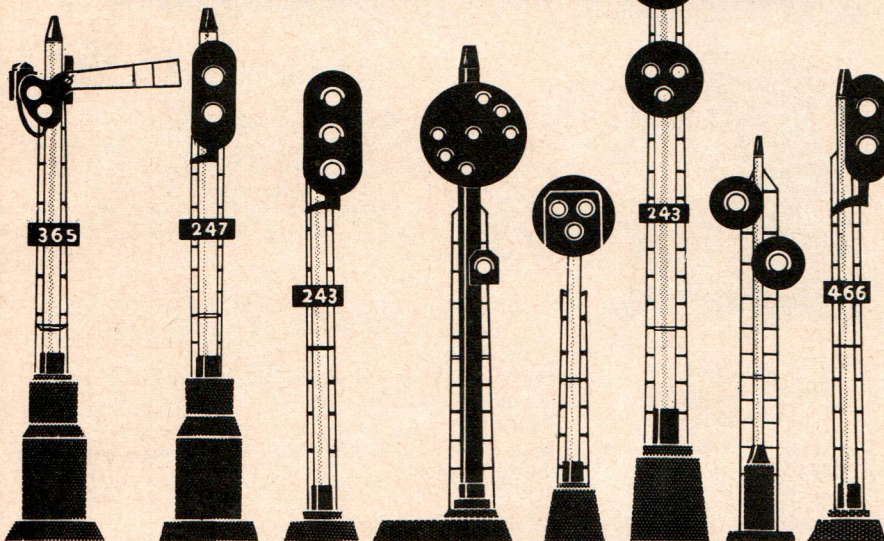
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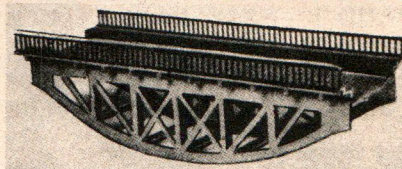
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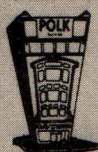
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Missouri Pacific boxcar 80270 was chosen to be the model for the Lionel 3376 Operating Giraffe Car during the Mid-Continent Region trip on the Reader Railroad, at Reader, Arkansas, in early June.

GIRAFFE CARS for the Reader!

by Wilbur T. Golson

THE ONLY remaining regularly scheduled mixed train powered exclusively by steam is actually four different trains, all operated on the Reader Railroad, a 24-mile long oil carrier connecting Reader with Waterloo, all within the state of Arkansas. Train No. 1 leaves Reader each weekday at 10:30 a.m. with a scheduled 12:30 p.m. arrival at Waterloo. The train leaves Waterloo as No. 2 at 2:00 P.M., returning to Reader at 4:30 P.M. The Saturday runs follow the same schedule but are numbered 3 and 4. There is no scheduled Sunday service, although the road will put on a special anytime it doesn't interfere with regular freight operations, if there is a minimum of 70 adult fares.

The Reader derives much of its freight revenue from oil and asphalt industries. The line was built to haul virgin timber to a connection with the Missouri Pacific at Reader.

Among the passenger equipment on the Reader are found fluted steel Milwaukee Road open end coaches of the mid-1930 era and a deluxe New Haven lounge-coach. No other railroads offer connecting passenger service with the Reader.

The Reader really stuck its neck out when it made the prototype version of Lionel's famous 3376 Operating Giraffe Car, because they had the lettering wrong!

Reader No. 1702 Baldwin built 2-8-0 came from the Warren & Saline River where she carried the same number. Those lines reveal her origin as a 1942 vintage Baldwin hog built for the U. S. Army.



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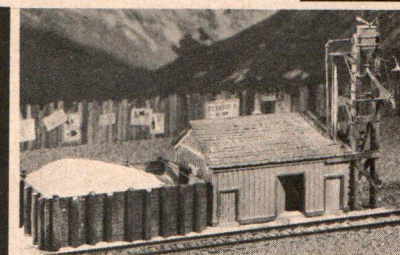
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fied Ad Dept., RAILROAD MODEL CRAFTSMAN, 6 East Main Street, Ramsey, New Jersey 07446. Ads sent to other departments may be delayed or lost. CLASSIFICATIONS: Model Railroad, Railroadiana, Custom Building Services, For Sale, Wanted, Help Wanted, Positions Wanted, Toy Train Collectors, Miscellaneous. All ads are accepted subject to the approval of the publisher.

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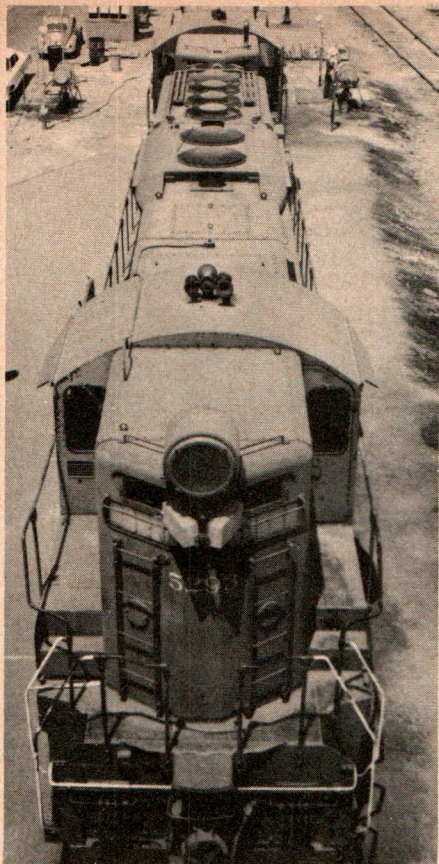
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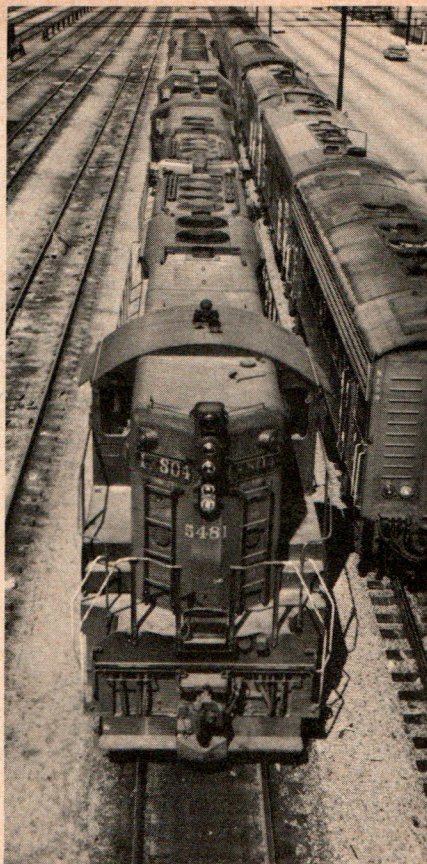
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Front view of SD-7 shows classification lights of Espee loco mounted on small hinged doors, shown in open position. Note roof detail.



Top front view of Espee SD-9 shows left hand MU connections rather than right hand as on SD-7.

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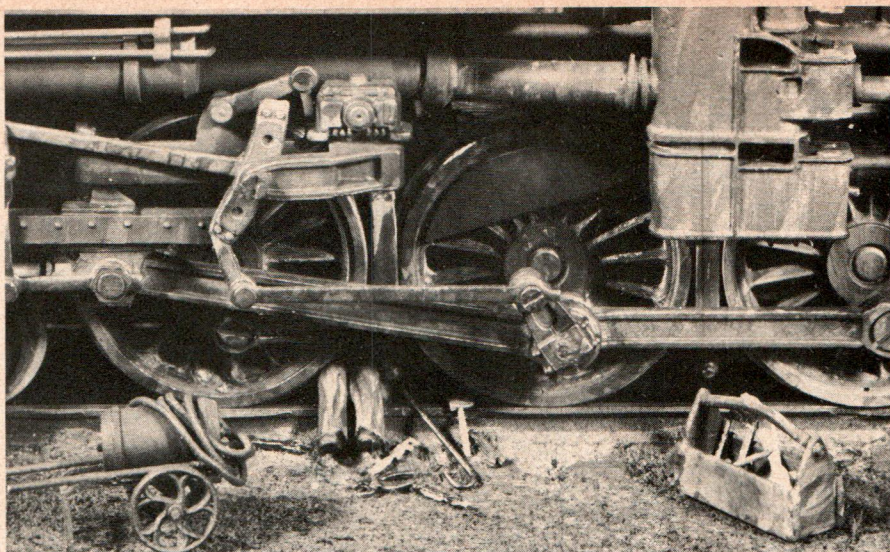
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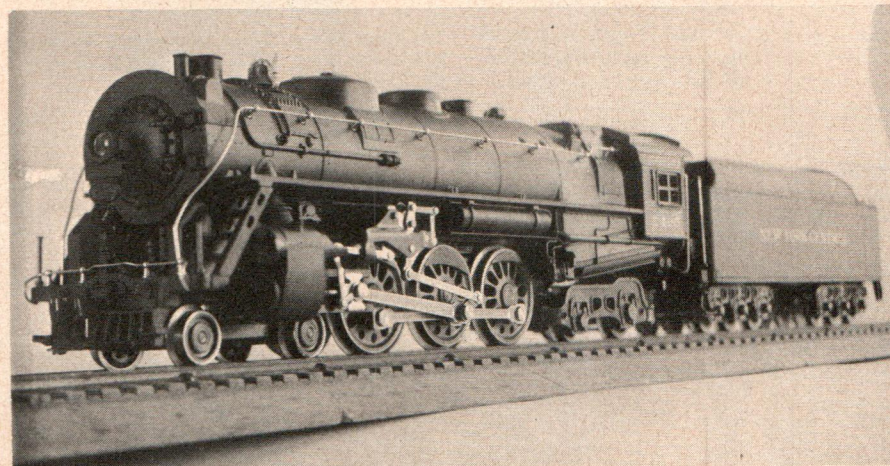
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Whether or not to weather locos and cars is a problem for many. We think this photo speaks eloquently for Paul Jansen's masterful attempt at recreating the action that once was found in the steam loco terminal. Valve gear work is Max Gray MT-4.

TEST TRACK



New York Central J-3a Hudson HO

Mfd. by Rivarossi, Italy, and imported

by Associated Hobby Manufacturers, Inc., 3214 N. Boudinot St., Philadelphia 34, Pa.

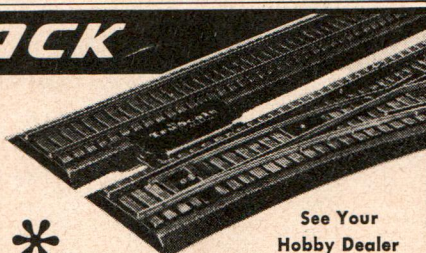
American Locomotive Company's Schenectady plant built New York Central's class J-3a Hudsons in 1937, series 5405-5444. An additional batch of streamlined J-3a locomotives, later deshrouded, were built in 1938, Nos. 5445-5454. The J-3a locos had 79 inch Box Bok drivers applied to 25 locos in the series, the rest receiving Scullin disc drivers. The series was considerably advanced over the earlier J-1 series Hudsons, the first of which was delivered in 1927.

The Rivarossi model is lettered for No. 5405, the first locomotive in the series and is equipped with Box Pok drivers and the 30 ton, 14000 gallon coal tender with water scoop, used by the Central to eliminate excessive water stops. The boiler, pilot, truck side frames, and tender shell

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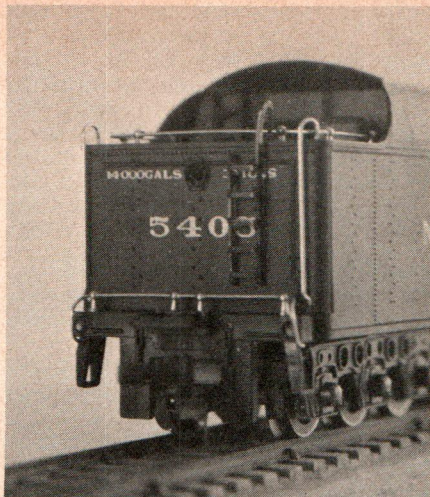
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are all molded in plastic, minutely detailed. The coal pile in the tender is slightly concave as though some of the fuel had already been used. The locomotive's exterior plastic surfaces have been painted with a dull black paint having a very soft sheen.

As with other Rivarossi steam power, the Hudson is powered with Rivarossi's bearing motor delivering power to the drivers by means of a horizontal shaft connected with a gear box delivering power to a second worm and gear set powering the drivers. The drive operates very smoothly and is amazingly quiet. At full speed, our test sample drew somewhat less than .5 amps. The loco also throttles down nicely to the lower speeds. She takes 18" radius, but looks better on wider radius curves as do all big locomotives.

Truck frames, as mentioned, are unsprung plastic with fine detail. Pony and trailing trucks are lightly sprung for better tracking. Valve gear is Baker. All wheels are of nickel silver with plastic centers. Metal pressure discs against the two end wheels, left side of the two tender trucks, provide pickup contact with the track, transmitting the current from the locomotive to the track. A bulb is mounted inside the boiler, illuminating the headlight. A dummy AAR coupler is mounted in the pilot, while a horn type coupler is frame mounted on the tender. The offset shank Kadee coupler would probably be the best bet for those converting.

Handrails are steel with some boiler piping milded integrally. Lettering is oldstyle New York Central of 1937 vintage. Roman. The lettering in white is nice and crisp though the tender lettering appears a trifle oversized and should be the same size as the cab numerals. The lettering nevertheless provides a delightful contrast to the modern lettering usually found on NYC loco models today. And we should award a bottle of Chianti to the manufacturer for including the loco number and tender capacity on the rear of the tender, a bit of detail often overlooked.

Modelers having the luxury of

wide radius curves will want to shorten the length of the drawbar, thus reducing the distance between the cab and tender to a more prototypical amount. Wheels are equipped with flanges made to NEM standards, which will not track through code 70 rail but will accept most code 100 standard HO rail. Those using code 70 rail can turn the flanges down.

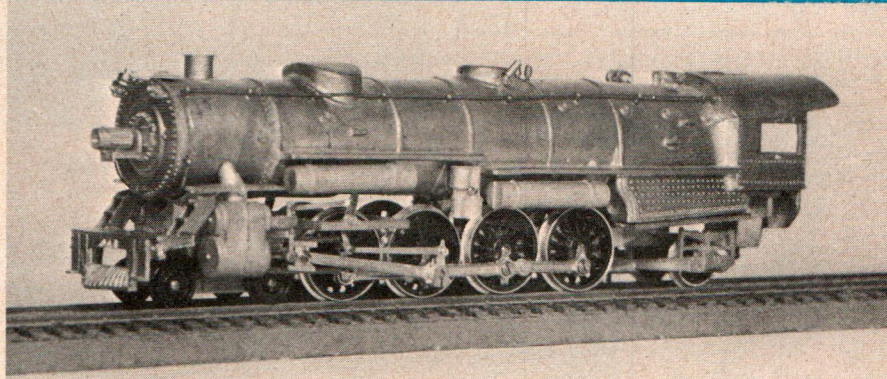
The adept modelers should also be able to convert the J-3a into a variety of other J class engines with such tricks as filing away the feedwater heater, substituting shorter tenders with 4-wheel trucks for Boston & Albany or class J-1a, substituting pedestal type tender or modern let-

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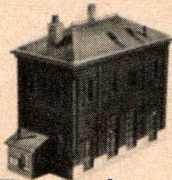
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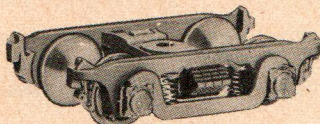
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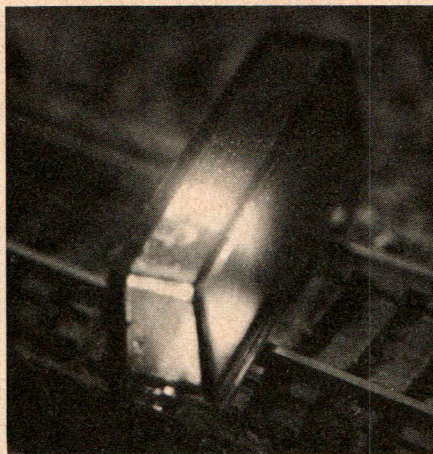
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Calif. 91605

tering for later period operation, adding a drop coupler to the pilot on possibly an entirely new lost wax pilot assembly, and making various other minor detail changes to the boiler.

At \$29.95 ready to run painted and lettered, the J-3a Hudson is a remarkable value, catalog No. 5096.



Track Test Light: All Gauge

Mfd. by Campbell Scale Models, P. O. Box 121, Tustin, Calif.

Leo Campbell has dreamed up a handy little track test light which modelers will find more convenient in most instances than the old familiar bulb-with-two-lead-wires standby. Campbell's Track Test Light is rectangular, measuring about 1 3/4" in length, 5/8" high, and about 3/4" wide but tapering towards the top. The unit is molded in translucent plastic in a choice of colors: red, green, or orange. Set into the base are two nickel silver metal contacts each 3/4" wide separated from each other by an air space of 1/16". These metal contacts, shaped almost like an HO rail, also hold in place lead wires from the grain of wheat bulb mounted inside the unit.

In use, the modeler places the Track Test Light on the track, any gauge or scale from N or HO to 2 1/2", right on up through O, or even inside third rail O or Standard Gauge track. If there is juice, light lights. If there

is no juice, or a short, the light won't light. Since the unit sits on the track and doesn't require hands to hold it, both hands are free for whatever repair work might be needed. The lack of clips also speeds up work. The bulb is readily replaceable by the modeler should it ever burn out. Catalog No. 550 at 98c belongs in every model railroader's track repair kit.

Colorado Midland 0-6-0: HO

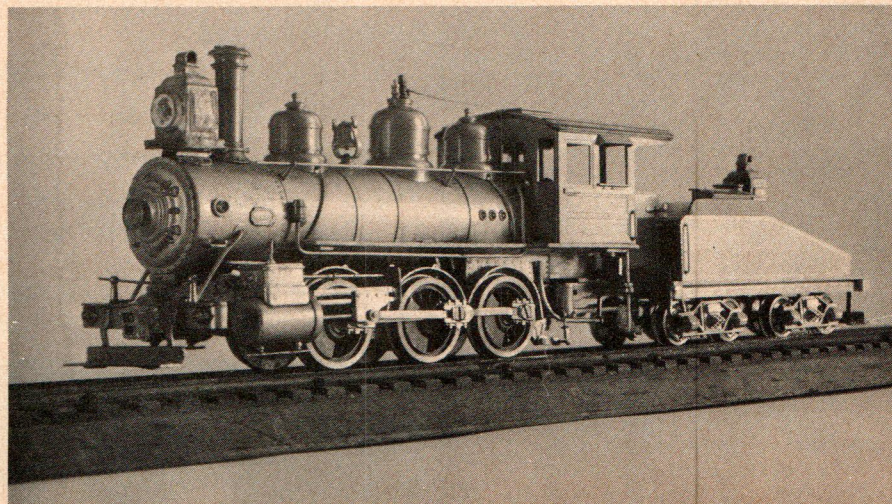
Imported by Model Engineering Works, P. O. Box 261, Monrovia, Calif.

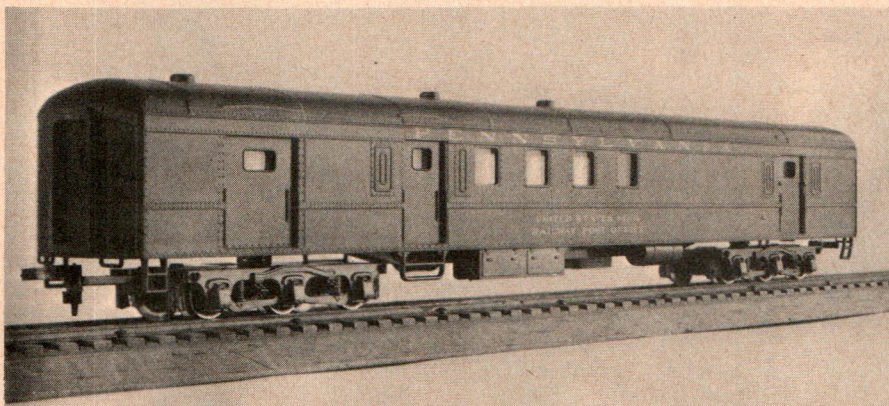
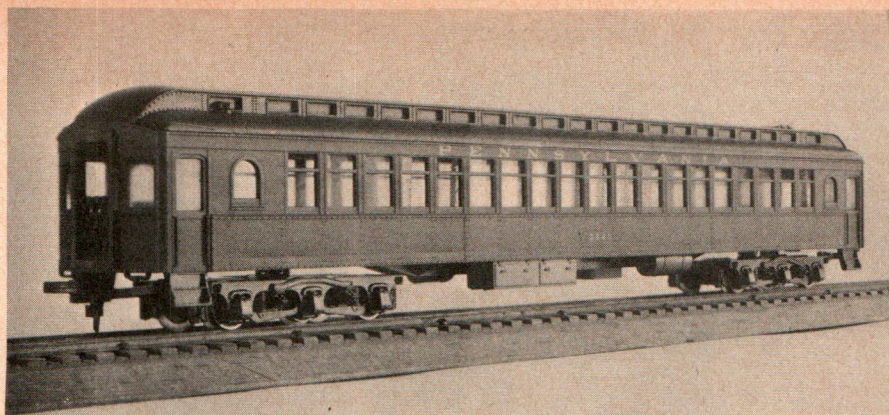
The Colorado Midland Railroad ordered three 0-6-0 switchers from the Schenectady Locomotive Works in 1887, Nos. 30, 31, and 32. The three locos were put to work on construction trains and switching service. Re-numbering Midland locomotives saw them become Nos. 100-102. With abandonment of the Colorado Midland in 1918, the locomotives were sold.

The Colorado Midland 0-6-0 is a delightful little beast with atypical lines. The modeler willing to research the project a bit could no doubt convert this engine into a wide variety of more local prototypes if he so chose. Newer style headlights, additional piping, revamped cab window arrangement, and other similar changes would do the trick.

The above changes aren't needed for Colorado Midland fans. The locomotive has two operating headlights mounted in old style oil headlamps. Reverse rodding extends from the cab to the cylinders. Running boards have planking detail etched in. Nickel side rods are delightfully thin, scale for the period.

The tender is a slope back design. The modeler does have to add his own coal. Tender trucks are arch bar, unsprung. A small Japanese permag motor cab mounted delivers power to the second pair of drivers through a steel worm and brass gear. Overall length is a bit over 7 inches and the overall wheel base about 5 1/2". The exact length will vary, depending on the sharpness of your curves and which hole of the wire-less drawbar is used. Modelers with





sharp radii curves will have to stretch the loco out a bit. We had our sample running on 18" curves but the importer claims she will take down to 10" radius. The locomotive ran smoothly without breaking in. At switching speeds the engine drew about .5 amps. She ran smoothly at lower speeds on clean track. She also ran well at higher speeds, which is not prototypical unless the modeler is thinking in terms of conversion to a Mogul. The loco, incidently, takes on a heavier appearance with a rectangular tender.

Modelers who have been waiting for a good older style 0-6-0 switcher that will still fit in with the scheme of things as they were around the 1940 era will find this little switcher a must. List price, ready to run unpainted, with decals and unmounted draft gear box with horn coupler, \$49.95.

70 Ft. Monitor Roof Steel Coach: HO

70 Ft. R. P. O. Car: HO

Manufactured by Rivarossi, imported by Associated Hobby Manufacturers, Inc., 3214 North Boudinot St., Philadelphia 34, Pa.

Two new cars have been added to Associated's lineup of standard steel passenger cars; a 70 ft. railroad-roof single-window coach, and a modern 70 ft. steel Railway Post Office Car with low streamlined roof configuration. The two cars are essentially identical in construction, except for differences in basic type.

Each car measures 10 1/4 inches. Car bodies are one piece plastic injection moldings of fine quality and detail.

Underbody detail is complete and includes brake rigging and other lines but is identical for both cars. The plastic used is a deep metallic grey color which provides a realistic tone for the interior, underbody detail, and truck side frames. The coach is equipped with a monitor roof and the R. P. O. car has a very low silhouette streamlined roof, rounded at the ends. The clear window insert is molded integrally with the roof sections and clips to the car floor for easy removability. Both roofs are test track 6 spray painted black in a realistic dull finish.

Both cars are equipped with the same six wheel Commonwealth trucks used on earlier cars in the Riverossi series, having one piece molded construction with nickel silver rimmed wheels. NMRA type horn couplers are spring fastened to the trucks, Talgo style, permitting them to negotiate 18" radius curves. Wheel flanges are to NEM standards.

Advanced modelers wanting to operate these cars on wider radius curves may want to replace the horn couplers with body mounted draft gear. This would prevent the cars from negotiating curves much under 26" radius. Trucks are held in place with a force fit pin and are readily good with a standard four wheel passenger truck, which would make these cars more suitable for local and commuter service. No deluxe car is offered at present for the coach but interior detail kits are available from Walthers and other firms for those who would like to add seats and lights.

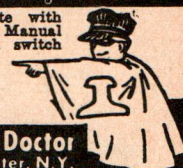
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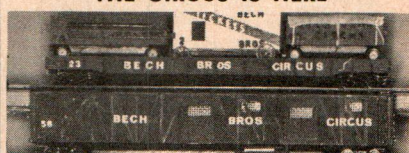


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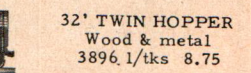


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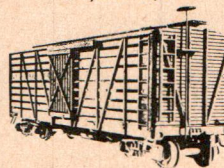
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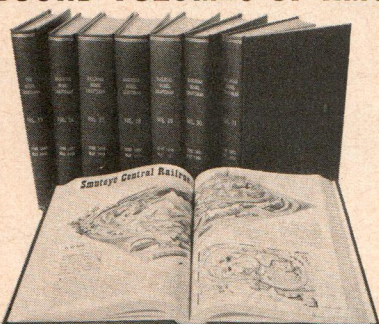
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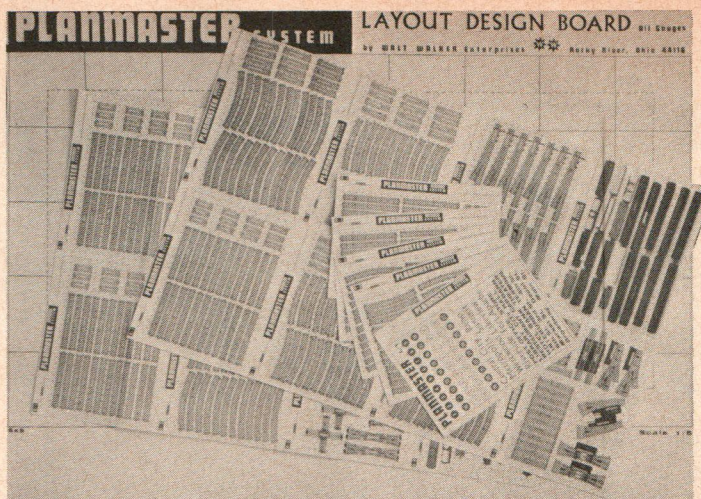
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bule windows and arched rest room windows. Some modelers might want to cover the end windows and change the shape of the rest room windows if their local railroads had some other type window. The coach design is otherwise classical, with its single windows (some railroads used only paired windows on their coaches).

The R.P.O. is a late Pennsylvania Railroad design. Both cars are offered in a choice of three road names: Pennsylvania Railroad (tuscan red body), Santa Fe (Pullman Green body), and New York Central (Pullman Green body). Both cars list at \$3.98 ready to run and we anticipate seeing a lot of these cars on layouts everywhere.

Track Planmaster: HO

Mfd. by Walt Walker Enterprises, 19030 W. Lake Road, Rocky River, Ohio 44116.

Model railroaders who would like to take the guesswork out of their layout planning might find Walt Walker Enterprises' new Planmaster layout system of interest. The planmaster package includes a 1/5 actual size layout design board laid out to make a railroad of up to 5x9 ft. Actual photographs of track, turnouts, locomotives, cars, and other components are also provided, printed on pressure sensitive, self adhering paper.

To use, the modeler cuts out the various needed track components, and lays them out on the board. By having actual cutout templates, photographic, it should be easy to lay out the model railroad without running into problems of terminal turnout crowding or sidings which are too small, when drawn with pencil, ruler, and compass.

Track provided is all Snap Track or equivalent, meaning that the Snap Track parts shown would also be suitable for K&B Tru-Track or any other sectional track brands adhering to the identical geometric pattern as the Snap Track system. Some other switches are included, notably Atlas No. 6, and several Fleischmann odd types: 3-way, switch on curves, and single and double slip. The modeler

would not be able to use these Planmaster pieces if his switches are No. 8 or larger, or if he is using Casadio slip switches and other track components by Tru-Scale. Even in the No. 6 switch, the modeler using Tru-Scale could not substitute the Atlas No. 6 unless he compensated for the difference in turnout length on both the curved and straight part of the turnout.

Curved track is provided for the three basic Snap Track radii: 15", 18", and 22". Straight track is standard 9" length plus the shorter standard Atlas lengths.

Inclusion of cars and locomotives, including three typical trolleys, will give the embryo modeler a good idea as to his yard and main line capacity. Included are Electro-Motive A and B units, two hood units, and three steamers, one of which is the General.

Also included is the Atlas turntable and various other structures: water tower, station, interlocking tower, and others. Identifying numbers, city names, and signs are also included.

This set will be of limited use to advanced modelers with radii above 22", or to modelers who use regular Atlas track, or any brand of track other than Snap Track or compatible sectional track systems of identical contour. Advanced modelers will also find it difficult to correlate the few usable pieces with the scale of 1:5, which makes it difficult to transpose from actual feet and inches, since one actual foot reduces to an awkward 2-13/32". It would have been preferable to make the scale 1:4, in which one real foot equals three inches, and each quarter inch would represent one real inch, or a smaller scale in which each eighth inch equals a real inch.

Despite the above shortcomings for advanced workers, the Walker Planmaster can be of great service to anyone who does restrict his track to the pieces provided with the set, which lists at \$2.95. A companion set for model auto racing layouts, including road-rail crossings, is also available to the same scale at \$1.50.

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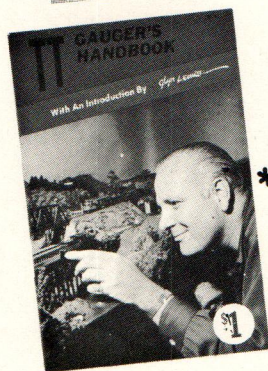
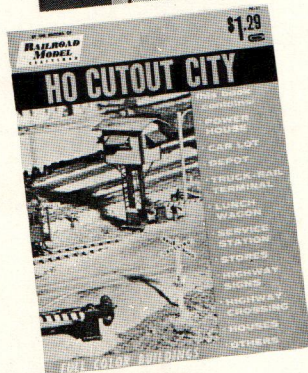
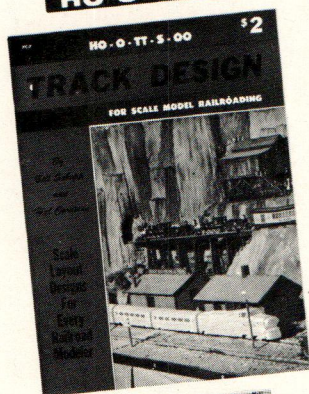
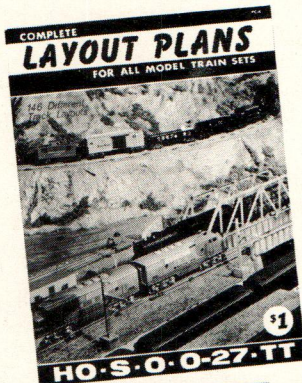
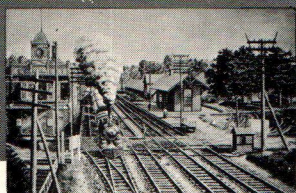
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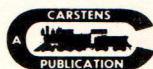
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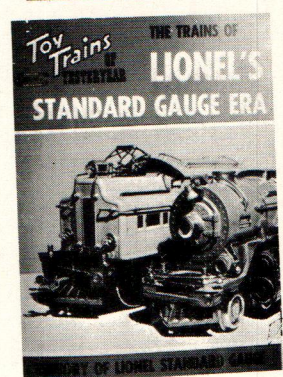
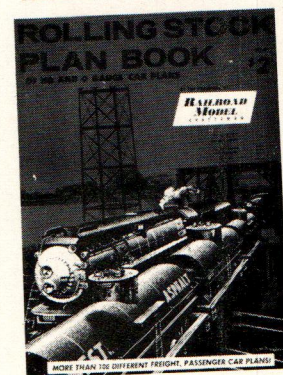
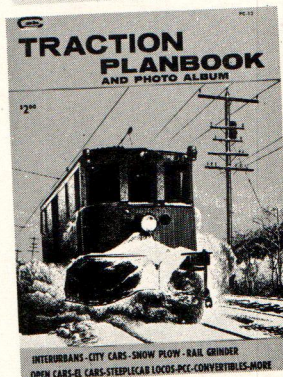
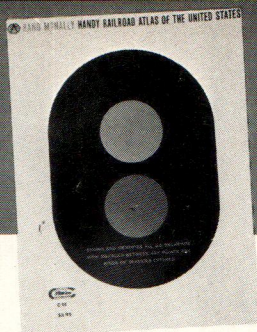
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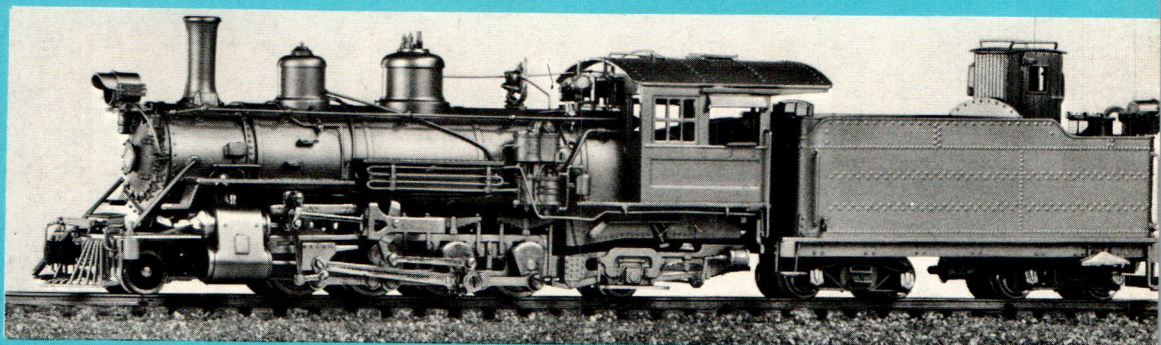
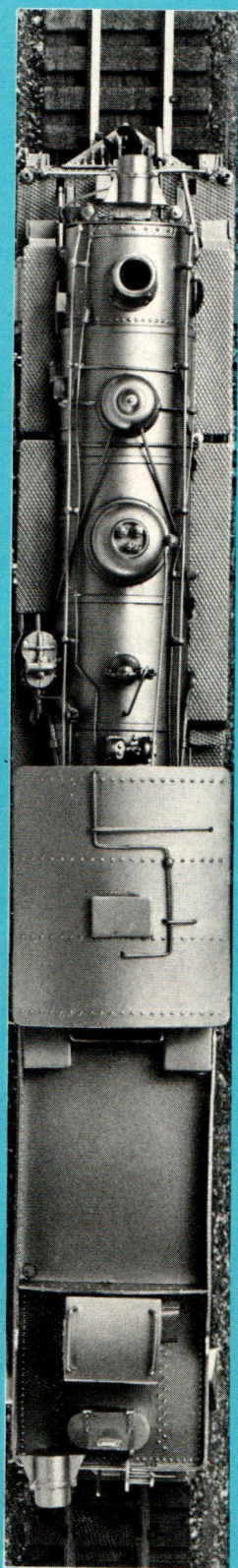
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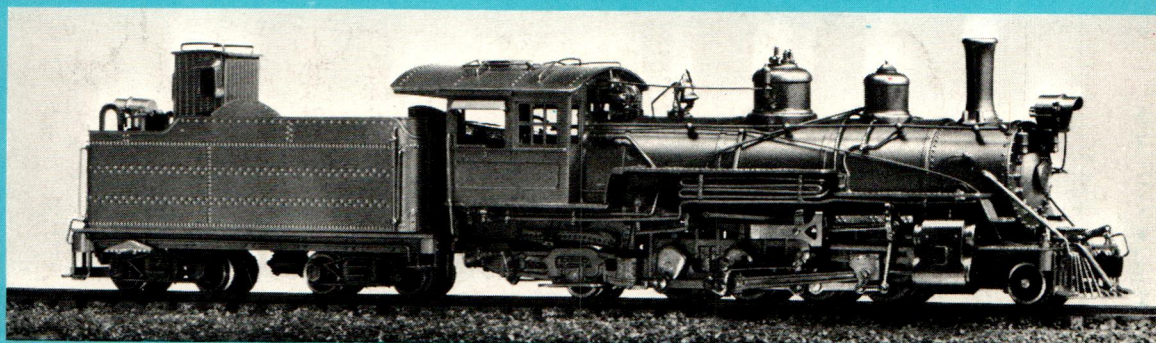


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